

677-782

Black oak, 11's 400-609 609-615 615-620

407 A

U. villa? on Q. coccinea Yaphank.
Sept. 3 1897.

Hd. $.6 \pm$ length 3.3 to 3.5 Pale yellowish
a line of orange & brown in brown

Hair fine, of another little Y back 4-5 back
black tipped by shock 1896 L. 8 m

Lappet-like strip of light brown
brown tinted.

Other writers
do not see

1. Length 2
 2. Band, 3 or 4

407 A

N. villa? on Q. coccinea Yaphank.
Sept. 3 1897.

Hd. .6 \pm length 3.3 to head Pale + almost
a line of opaque d. band, i7 brown.

Hairs fine, spinulose, pale. ① fine
black tipped, next ③ with elongate
lappet-like base. ① 9 and 11 also slightly
brown tinted.

Other without brown next, length 4
hd next over .6 mm

Hd. 4, length 2.5 with same pattern, as of
band. An unpaired brown dash 7 longish
nearly dusky. Hd with faint brown
striae.

Sept 16 Length 4.3 Hd .6 Same

Hibernated & died

Another little Y backer. Red
on white side July 31 1896 L. 8 in
egg shell singly in back of leaf near
tip of a lob between edge & midrib
elliptical, flat 1.0 x .6 shell white
(double color as the latched side
is so) sets, obscure linear rounded
irregular. late in P.M.
shed Aug 9 like K

885

Like code in I taken for red
crosses. July 30. Y's. skin smooth
ridges tuberculately angled on seg.
Shed att 3 (different) Elliptical
manirved behind, tail gradate
General shape of red crosses but
short distinct pointed paired
black setae on D. depressed & not
large sharp, deep as in red
forming the usual latched ridge
apparent of 1 quarte, but not
smooth & clean, instead all
fine papillae, esp. on the

ridges, feathery, fringed, the
granules seeming indistinct.
all pretty whitish, no marks

Aug 3 1.0

" 4 1.2

" 5 1.3

" 6 1.6

" 7 1.6

" 8 " "

" 9 1.7

" 10 2.2

" 11 2.5

" 12 " "

" 13 2.7

" 14 3.2

" 15 3.6

Shed ~~Aug 9~~ still setae ③

shad black distinct.

skin really granular

as in next. Papillae

up around margin ②.

Colours present a faint

red shade centrally

on the ridges ①. Aug 11

& large red patch, the

depressed spaces in it pale

Aug 11 large normal patch

Shed ~~Aug 13~~ Sep. spaces large

normal, ridges beginning

to be more than 1 granule

later still visible. Tail

quadrate. Whitish, only a little green.

a large round faint reddish patch

6-9. Aug 14. Large red patch

yellow bordered, the yellow reaching

back along the ridge.

Evidently
red + 2
[just out]



Black oak J's mile 671 #1010 683-676 better price
White oak J's hammocks water
in water 1/2 mile 1/2 mile

June 18
1898

680

Noctuid? on *Nyssasylvatica*, Moriches
L.I. July 30, 1897. Green, a little flattened
tapering behind. Feet normal. Warts.

Hd 5 round green. Flattened, green, trace of

white side line. i 3 hairs, ii single, iii many

Hd 9 green, narrow white sd line below

ii and small antecy. d dots: clear green

Warts same, hair pale, fine, partly dusky

i 2 hairs; ii, iv, v, single; iii, vi many, head

prob iii very prominent from bulging of sides

Hd 1.6 green; d antecy single & paired

adducal segmental white dots. sd

line 3-13, white just below ii anal

feet distinct, segs from above. Warts the

same. Hair fine, pale

A 8 Hd 2.2 Rounded, whitish green, smooth

white; a tiny black dot in middle

of each lobe before. Much less hairy in

appearance. i of several hairs, but the

last or small as to be not seen by

680

SMITHSONIAN INSTITUTION.

UNITED STATES NATIONAL MUSEUM.

MEMORANDUM.

Egg on *Nyssa* Rock Creek Md
Aug 12 1898. Laid on back of
leaf in crotch of new.

Circular, flat, slightly arched,

Surface with low angular ribs

about 66, poorly marked, not

high, cut into a series of clayed

transversely, elliptical beads

Holms between traceable as

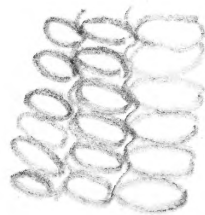
a wavy line. Line rather

straight & distinct, diminishing

in number toward vertex, the

microphyl a confused

mass of beads



was wrong. Is it not Polygrammate?

present in incision of the faint annulets

14

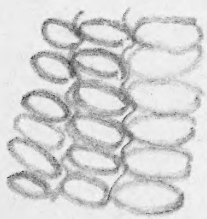
680

SMITHSONIAN INSTITUTION.

UNITED STATES NATIONAL MUSEUM.

MEMORANDUM.

Egg on *Nyssa* Rock Creek Md
 Aug 12 1898. Laid on back of
 leaf in crotch of vein.
 Circular, flat, slightly arched.
 Surface with low angular ribs
 about 66, poorly marked, not
 high, cut into a series of clay-like
 transversely, elliptical beads.
 Grooves between traceable as
 a wavy line. Line rather
 straight & distinct, diminishing
 in number toward vertex, the



microscope a confused
 mass of beads

was wrong. Is it not *Polygrammate*?

June 18
1898

680

Notund? on *Myrsine*, Moriches
L.I. July 30, 1897. Green, a little flattened
inferior behind. Feet normal. Warts.
Hd 5. Round green. Flattened, green, trace of
white side line. i 2 hairs, ii single, iii many.
Hd 9. Green, narrow white sd line below
ii, and small interseg. d dots: clear green
Warts same, hair pale fine, partly dusky,
i 2 hairs; ii, iv, v, single; iii, vi many, band
viii very prominent from bulging of sides.
Hd 1.6 Green; d interseg single & paired
adducal segmental white dots. Sd
line 3-13, white just below ii anal
feet divergent; ~~seen~~ from above. Warts the
same. Hair fine, pale.

Hd 2.2 Rounded, whitish green, smooth
white; a tiny black dot in middle
of each lobe before. Much less hairy in
appearance. i of several hairs, but the
best or small as to be not seen by

lens, ii a long strong hair; iii a strong
hair and a few small weak ones; iv a
tiny hair; v a strong hair; vi several
small hairs. Thoracic warts similarly
reduced. Clean green, d. interseg white
not elongated, sd-d round; sd line
straight, yellowish white. Warts iii
shiny, spiracles reddish. Clasper of
abd. feet elongate. In some spiracles
warts v & vi abd. & iii, iv & v, vi of thorax
are surrounded narrowly by red-brown.
Hd d. dusky, pale 5-v. Later more
whitish, less clear green, 2 and hd. a
little yellowish, marks less contrasted.
Hd still 2.2 divided with broad purplish along
blotches of white dots confluent in groups
over the face of body lobes; green in front &
still greenish. Body greenish white to v,
all white orange. A white d. lateral line,
stip region all white, broken obscurely by
greenish in invasion of the faint annulets

A series of numerous purple-brown spots
irregular geminate row d. of 4 the second
single, before; behind; above & below
sd line, small, blotched; before & behind
iii; over most of sd space forming a sharp
line under to the white stig space,
marked up in seg. incisions. Setae all
dark. Dorsum faint purplish shaded
all over.

Body is und. like ~~hirsutissimus~~ hirsutissimus and
the und. space is small irregular
balls.

Hd 3 Whitish with green tinge. Setae, flat
parts same, iii large, many, branched.

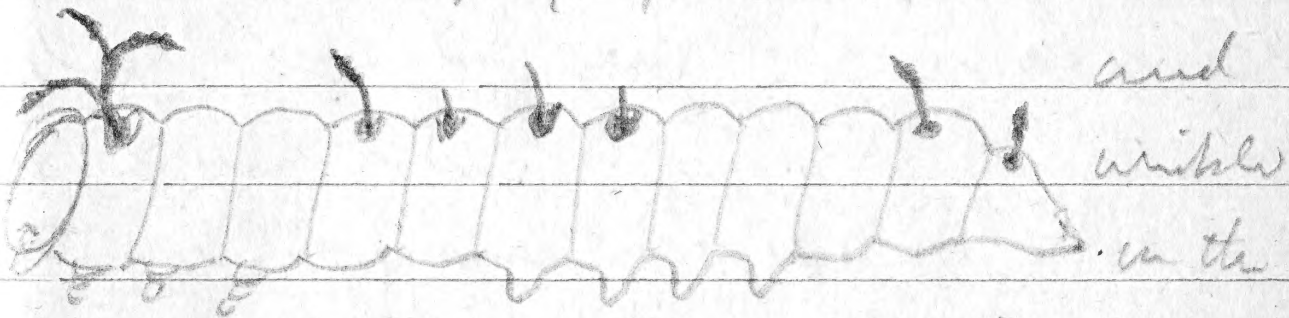
Hd 2 Whitish, body a little green tinted at
end of stage. Vents small but same, i. two
branched, iii many

Larvae to shed	Hd. 2	Length	2.0 mm	✓
	Hd. 3		4.8 "	✓
	Hd. 5	"	6.5 "	✓
	Hd. 9	"	8.5 "	✓
	Hd. 1.6	"	14.0 "	✓

Out June 10 1898 Cat. no. 15033

681

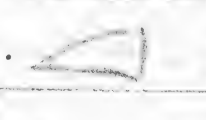
Horns a black oak Yaphank L. I Aug 2
1897. Chorus 3 times, the upper wrinkles, setae
and thickenings; 5, 12, 13 horn also clothed



outer part, 7 moderate, 6, 8, very short, 9, 10
without even a plate. Hd same, horn
in. in. Body firm, dorsal longitudinal
streaks with red and yellow, a lighter
space d on 10-11 and darker 12-13. Feet and
leg-plates and horns black. Anal feet diverge

The short horns 6-8, 13 coverage in pairs on the
back. Shield of 2, 5, 13 consolidated, other small
paired. Tiny black dots represent i on 9 & 10.

all much cephalous a seg. No spine on c-horn
shed Aug 5 - Hd. narrowing above not bilobed, all
pale horn; w 1 m. Body with short triangular
horns, black tipped. Anal feet slender
divergent. Smooth, all streaked with

brown, yellowish, narrow white d. line
 extending into patch 4-8, a line on 9
 10-11 divided into 2 to a sd line to
 plate. Anal feet up. Pale annular
 streaked except those sd line pale.
 Feet annular, anal darker reddish.
July 1st Aug 5 Hd high 17 mm pale
 whitish a rounded blotchy band of light
 disk up edge of each side and 2 pair of
 spots each side on surface above small
 reddish spots on the whitish ground. Chon
 short, with 3 separate black tips. Pale
 streaked faint yellow brown with a rounded
 double sd yellow streak in thorax yellow
 d. band on a between head narrow 3-4
 5-8, broken 8;  8-11, narrow with sd
 bands 12-13, its edging dark. Abd. feet
 annular, the pale whitish anal feet
 line reddish 1-7, 8. Hd more than joint 2
Aug 12 Aug 16 Same. Mottled with streaks
 1 dot of brown on a small present ground, dark
 on 12-13 around spiracles on 5, 9 and

13, a straight pale sub-stig line; sternum brown
 on the sides. Hd whitish, fringed dark irregularly
 with an irregular blotchy band on 15 of lobes.
 - brown short, red, with 3 black tips. D. white
 as before, the large blotches
 with a greenish d. line and
 the streaking, all dull red. A faint yellowish
 leading edge within the dark ~~band~~ of 12-13 and
 little on side of thorax & a faint yellow
 anal feet divergent, slender, white above
Aug 17 Hd 3.8 Same, no cervical
 horns. = 406. From form of 1.

1.0-1.8	2
1.5-1.8	1
2.4-2.9	0
3.0-6.0	0

6.0-9.3 ✓
9.1-13.5 ✓
13.5-18.3

More to back of car and
chestnut in front
Kempson Lake, Aug 13

(viii) $7m\frac{1}{2}$

7-2 2.3 604
 7-2 2.3 604
 7-2 2.3 604
 7-2 2.3 604
 7-2 2.3 604

6625

10

95	48	247
96	51	248
97	56	249
98	60	250
99	64	251
100	68	252
101	72	253
102	76	254
103	80	255
104	84	256
105	88	257
106	92	258
107	96	259
108	100	260
109	104	261
110	108	262
111	112	263
112	116	264
113	120	265
114	124	266
115	128	267
116	132	268
117	136	269
118	140	270
119	144	271
120	148	272
121	152	273
122	156	274
123	160	275
124	164	276
125	168	277
126	172	278
127	176	279
128	180	280
129	184	281
130	188	282
131	192	283
132	196	284
133	200	285
134	204	286
135	208	287
136	212	288
137	216	289
138	220	290
139	224	291
140	228	292
141	232	293
142	236	294
143	240	295
144	244	296
145	248	297
146	252	298
147	256	299
148	260	300
149	264	301
150	268	302
151	272	303
152	276	304
153	280	305
154	284	306
155	288	307
156	292	308
157	296	309
158	300	310
159	304	311
160	308	312
161	312	313
162	316	314
163	320	315
164	324	316
165	328	317
166	332	318
167	336	319
168	340	320
169	344	321
170	348	322
171	352	323
172	356	324
173	360	325
174	364	326
175	368	327
176	372	328
177	376	329
178	380	330
179	384	331
180	388	332
181	392	333
182	396	334
183	400	335
184	404	336
185	408	337
186	412	338
187	416	339
188	420	340
189	424	341
190	428	342
191	432	343
192	436	344
193	440	345
194	444	346
195	448	347
196	452	348
197	456	349
198	460	350
199	464	351
200	468	352
201	472	353
202	476	354
203	480	355
204	484	356
205	488	357
206	492	358
207	496	359
208	500	360
209	504	361
210	508	362
211	512	363
212	516	364
213	520	365
214	524	366
215	528	367

1	5.0	100
2	7.5	"
3	10	"
4	12.5	"
5	15	"
6	17.5	"
7	20	"
8	22.5	"
9	25	"
10	27.5	"
11	30	"
12	32.5	"
13	35	"
14	37.5	"
15	40	"
16	42.5	"
17	45	"
18	47.5	"
19	50	"
20	52.5	"
21	55	"
22	57.5	"
23	60	"
24	62.5	"
25	65	"
26	67.5	"
27	70	"
28	72.5	"
29	75	"
30	77.5	"
31	80	"
32	82.5	"
33	85	"
34	87.5	"
35	90	"
36	92.5	"
37	95	"
38	97.5	"
39	100	"
40	102.5	"
41	105	"
42	107.5	"
43	110	"
44	112.5	"
45	115	"
46	117.5	"
47	120	"
48	122.5	"
49	125	"
50	127.5	"
51	130	"
52	132.5	"
53	135	"
54	137.5	"
55	140	"
56	142.5	"
57	145	"
58	147.5	"
59	150	"
60	152.5	"
61	155	"
62	157.5	"
63	160	"
64	162.5	"
65	165	"
66	167.5	"
67	170	"
68	172.5	"
69	175	"
70	177.5	"
71	180	"
72	182.5	"
73	185	"
74	187.5	"
75	190	"
76	192.5	"
77	195	"
78	197.5	"
79	200	"
80	202.5	"
81	205	"
82	207.5	"
83	210	"
84	212.5	"
85	215	"
86	217.5	"
87	220	"
88	222.5	"
89	225	"
90	227.5	"
91	230	"
92	232.5	"
93	235	"
94	237.5	"
95	240	"
96	242.5	"
97	245	"
98	247.5	"
99	250	"
100	252.5	"
101	255	"
102	257.5	"
103	260	"
104	262.5	"
105	265	"
106	267.5	"
107	270	"
108	272.5	"
109	275	"
110	277.5	"
111	280	"
112	282.5	"
113	285	"
114	287.5	"
115	290	"
116	292.5	"
117	295	"
118	297.5	"
119	300	"
120	302.5	"
121	305	"
122	307.5	"
123	310	"
124	312.5	"
125	315	"
126	317.5	"
127	320	"
128	322.5	"
129	325	"
130	327.5	"
131	330	"
132	332.5	"
133</		

10. 11. 1914

[illegible]

11	3	18.0	"
11	5	"	work
11	5	"	work

2.4 g beads
2.5 g beads
3.7 g beads
4.1 g beads

Spotted-birds on a bridge joining (C)

the joining
structure
2) and a
different

682 A
43 1.4 57mm
5 1.6 4 high
7 1.8 10 high
8 1.4 10 shell

1.8 4/10
 12.2 Cent
 1.24
 1.24

21	2.5	4.5
22	3.1	2.7
23	2.5	1.0
24	2.5	1.0
25	2.7	1.0
26	2.7	1.0
27	2.5	1.0

2018 and
2019

1. The first part of the paper is devoted to a review of the literature on the topic of the role of the state in the development of the economy. It is found that the state has played a significant role in the development of the economy in many countries, particularly in the case of the United States. The state has been involved in the creation of infrastructure, the provision of education and health care, and the regulation of the economy. The state has also been involved in the provision of social security and the creation of a welfare state. The state has played a significant role in the development of the economy in many countries, particularly in the case of the United States.

Wed Aug 28 (VIII) Stage as described except
that the ...
682 E

Slender & la forest. Horns as fig 3, 4, 13 next disconnected.	13 an
Slope I in black oak at edge of	in, ind
Daph. Y. R. Shed Aug 12 (II) Litter 682 A	en
Aug 15 2.2 2.2 2.2	acc

Aug 15	2.2	shed	Shed Aug 16 (II) Like 682 III	acc
" 19 <td>2.5 <td>shed <td></td> <td>data</td> </td></td>	2.5 <td>shed <td></td> <td>data</td> </td>	shed <td></td> <td>data</td>		data
" 20 <td>3.9 <td>"</td> <td>Faint red in horn D 3-5.</td> <td>Ther</td> </td>	3.9 <td>"</td> <td>Faint red in horn D 3-5.</td> <td>Ther</td>	"	Faint red in horn D 3-5.	Ther
" 21 <td>3.9 <td>682</td> <td>very light distal B. horn D.</td> <td>13</td> </td>	3.9 <td>682</td> <td>very light distal B. horn D.</td> <td>13</td>	682	very light distal B. horn D.	13
" 22 <td>" <td>"</td> <td>fine white dot on 9 horn</td> <td>5/6</td> </td>	" <td>"</td> <td>fine white dot on 9 horn</td> <td>5/6</td>	"	fine white dot on 9 horn	5/6
" 23 <td>" <td>"</td> <td>682 II</td> <td>data</td> </td>	" <td>"</td> <td>682 II</td> <td>data</td>	"	682 II	data
" 24 <td>3.9 <td>shed</td> <td>Shed Aug 24 (IX) Like 682 B</td> <td>data</td> </td>	3.9 <td>shed</td> <td>Shed Aug 24 (IX) Like 682 B</td> <td>data</td>	shed	Shed Aug 24 (IX) Like 682 B	data
" 25 <td>4.1 <td>cat</td> <td></td> <td>data</td> </td>	4.1 <td>cat</td> <td></td> <td>data</td>	cat		data
" 26 <td>4.4 <td>"</td> <td>[year class left out for]</td> <td>data</td> </td>	4.4 <td>"</td> <td>[year class left out for]</td> <td>data</td>	"	[year class left out for]	data
" 27 <td>5.0 <td>"</td> <td>[year class left out for]</td> <td>data</td> </td>	5.0 <td>"</td> <td>[year class left out for]</td> <td>data</td>	"	[year class left out for]	data

Age	Sex	Length	Wing	Tail	Weight	Notes
2-8	♂	6.2	5.2	4.2	1.2	Shed Sept 12 (V)
2-9	♂	6.2	5.2	4.2	1.2	Shed Sept 12 (V)
2-10	♂	6.5	5.5	4.5	1.5	Shed Sept 12 (V)
2-11	♂	6.8	5.8	4.8	1.8	Shed Sept 12 (V)
2-12	♂	7.0	6.0	5.0	2.0	Shed Sept 12 (V)
2-13	♂	7.2	6.2	5.2	2.2	Shed Sept 12 (V)
2-14	♂	7.4	6.4	5.4	2.4	Shed Sept 12 (V)
2-15	♂	7.6	6.6	5.6	2.6	Shed Sept 12 (V)
2-16	♂	7.8	6.8	5.8	2.8	Shed Sept 12 (V)
2-17	♂	8.0	7.0	6.0	3.0	Shed Sept 12 (V)
2-18	♂	8.2	7.2	6.2	3.2	Shed Sept 12 (V)
2-19	♂	8.4	7.4	6.4	3.4	Shed Sept 12 (V)
2-20	♂	8.6	7.6	6.6	3.6	Shed Sept 12 (V)
2-21	♂	8.8	7.8	6.8	3.8	Shed Sept 12 (V)
2-22	♂	9.0	8.0	7.0	4.0	Shed Sept 12 (V)
2-23	♂	9.2	8.2	7.2	4.2	Shed Sept 12 (V)
2-24	♂	9.4	8.4	7.4	4.4	Shed Sept 12 (V)
2-25	♂	9.6	8.6	7.6	4.6	Shed Sept 12 (V)
2-26	♂	9.8	8.8	7.8	4.8	Shed Sept 12 (V)
2-27	♂	10.0	9.0	8.0	5.0	Shed Sept 12 (V)
2-28	♂	10.2	9.2	8.2	5.2	Shed Sept 12 (V)
2-29	♂	10.4	9.4	8.4	5.4	Shed Sept 12 (V)
2-30	♂	10.6	9.6	8.6	5.6	Shed Sept 12 (V)
2-31	♂	10.8	9.8	8.8	5.8	Shed Sept 12 (V)
2-32	♂	11.0	10.0	9.0	6.0	Shed Sept 12 (V)
2-33	♂	11.2	10.2	9.2	6.2	Shed Sept 12 (V)
2-34	♂	11.4	10.4	9.4	6.4	Shed Sept 12 (V)
2-35	♂	11.6	10.6	9.6	6.6	Shed Sept 12 (V)
2-36	♂	11.8	10.8	9.8	6.8	Shed Sept 12 (V)
2-37	♂	12.0	11.0	10.0	7.0	Shed Sept 12 (V)
2-38	♂	12.2	11.2	10.2	7.2	Shed Sept 12 (V)
2-39	♂	12.4	11.4	10.4	7.4	Shed Sept 12 (V)
2-40	♂	12.6	11.6	10.6	7.6	Shed Sept 12 (V)
2-41	♂	12.8	11.8	10.8	7.8	Shed Sept 12 (V)
2-42	♂	13.0	12.0	11.0	8.0	Shed Sept 12 (V)
2-43	♂	13.2	12.2	11.2	8.2	Shed Sept 12 (V)
2-44	♂	13.4	12.4	11.4	8.4	Shed Sept 12 (V)
2-45	♂	13.6	12.6	11.6	8.6	Shed Sept 12 (V)
2-46	♂	13.8	12.8	11.8	8.8	Shed Sept 12 (V)
2-47	♂	14.0	13.0	12.0	9.0	Shed Sept 12 (V)
2-48	♂	14.2	13.2	12.2	9.2	Shed Sept 12 (V)
2-49	♂	14.4	13.4	12.4	9.4	Shed Sept 12 (V)
2-50	♂	14.6	13.6	12.6	9.6	Shed Sept 12 (V)
2-51	♂	14.8	13.8	12.8	9.8	Shed Sept 12 (V)
2-52	♂	15.0	14.0	13.0	10.0	Shed Sept 12 (V)
2-53	♂	15.2	14.2	13.2	10.2	Shed Sept 12 (V)
2-54	♂	15.4	14.4	13.4	10.4	Shed Sept 12 (V)
2-55	♂	15.6	14.6	13.6	10.6	Shed Sept 12 (V)
2-56	♂	15.8	14.8	13.8	10.8	Shed Sept 12 (V)
2-57	♂	16.0	15.0	14.0	11.0	Shed Sept 12 (V)
2-58	♂	16.2	15.2	14.2	11.2	Shed Sept 12 (V)
2-59	♂	16.4	15.4	14.4	11.4	Shed Sept 12 (V)
2-60	♂	16.6				

682C, VIII, (continued) reduced, ①
and ② 3, 4 annular, short, ③ 6-12 gran
lous, low, not as long as wide
with and a few clubbed setae on
apex in the lower outer side and
some very short blunt spines
above. Horn ① 5-12 red, a round
cushion not as long as wide,
bearing a tuft of banded or blunt
tipped spines at apex directed
obliquely outward. ② 13 longer
tapering, pinkish red. Body
green, with prominent, apparently
uniform in both lines and spaces
darker to dark surrounding lines ①
1/2 ② 1/2 ③ 1/2 and the pattern of lines
as before pale whitish, the red
line narrow, concolorous and
uniform with the pattern lines.
Skin nearly contiguous close fine clear
granular, low, deep space and all, the green
pigment in the bases of the granules as
in *E. indoleum*, absent in the light marks
which are partly colored by blood. Spines with
sharp black tip, shaft white of the round
blunt lateral side of the clubbed subterminal
② spine also banded. The small
spines in bases of ③ 6-12 above are just
the same spine, grading to white
they are at apex edge of patch, black
tipped with color sharp colored
at base, monochrome. Patch a single semicircular
edge at upper border. Horns 4-12 can be

682 E

Flounder à la portal. Horns as
fig 3, 4, 13 next degenerated.

Stage I on black oak at Nymphe

Date	Y.	P.	Shed	Aug 10 (II)	Like 682 A
Aug 15	2.2	skel			skin reticula
" 19	2.5	cat			Shed Aug 16 (III) Like 682 III
" 26	3.9	"			Faint red in horns @ 3-5.
" 21	3.9	skel			Aug 19 distinct. B. horn d.
" 22	"	"			thin with dot on 9 like
" 23	"	"			682 IV.
" 24	2.9	skel			Shed Aug 24 (IV) Like 682 B
" 25	4.1	cat			[Horn clear, kept out the
" 26	4.4	"			normal III]
" 27	5.0	"			Shed Sept 12 (V) Like 682 C
" 28	5.6	"			VI but d. marking faint.
" 29	5.3	"			Shed Sept 12 (VI)
" 30	6.0	skel			Shed Sept 17 (VII) horns
Sept 12	6.5	cat			shed. last stage.
" 3	6.4	"			
" 4	7.0	"			
" 5	7.4	"			
" 6	8.0	"			
" 7	9.0	"			
" 8	8.7	skel			
" 10	8.5	cat			
" 11	9.8	"			
" 12	10.5	"			
" 13	11.5	"			
" 14	12.0	skel			
" 18	11.6	cat			
" 20	12.0	"			

Horn dried and crested

Color in a faint greenish blue
paling to a pale yellow in leaf
24 horns 1 inch with clear white
Cocoon slightly twisted, dark
brown without a veil
last a very few weeks with
threads, in ground or a
curled leaf. 7.5 x 7

Small leaves of *Persea* - like A II
 and B III - leaves 2-5 cm long
 and 1-2 cm wide - *Chenopodium* IV & V

22. ^{IV} Chrom. large at 1/2 inch. Essentially same
W. as 2-8 and 13 distinct a little longer than
the W. but a little longer than 6-10 which
are alike. 23-4 like large 22 6-12.

14.5 light red, @ 3, 3.8 pale red, cool green
 yellowish brown at base of red, 3-12 young
 brown by 6 series of minute dark dots. A d. row of
 male dots, largest in 11 seg. Segments are well
 marked in pale lines. Body green from
 above, lighter underneath. Whitish abdominal
 dots are larger in 1st. Space over lat.
 area is yellowish, 1st row 5-8 very small,
 2nd row 10-12, 3rd 10-12, 4th 10-12, 5th 10-12,
 6th 10-12, 7th 10-12, 8th 10-12, 9th 10-12,
 10th 10-12, 11th 10-12, 12th 10-12, 13th 10-12,
 14th 10-12, 15th 10-12, 16th 10-12, 17th 10-12,
 18th 10-12, 19th 10-12, 20th 10-12, 21st 10-12,
 22nd 10-12, 23rd 10-12, 24th 10-12, 25th 10-12,
 26th 10-12, 27th 10-12, 28th 10-12, 29th 10-12,
 30th 10-12, 31st 10-12, 32nd 10-12, 33rd 10-12,
 34th 10-12, 35th 10-12, 36th 10-12, 37th 10-12,
 38th 10-12, 39th 10-12, 40th 10-12, 41st 10-12,
 42nd 10-12, 43rd 10-12, 44th 10-12, 45th 10-12,
 46th 10-12, 47th 10-12, 48th 10-12, 49th 10-12,
 50th 10-12, 51st 10-12, 52nd 10-12, 53rd 10-12,
 54th 10-12, 55th 10-12, 56th 10-12, 57th 10-12,
 58th 10-12, 59th 10-12, 60th 10-12, 61st 10-12,
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 142nd 10-12, 143rd 10-12, 144th 10-12, 145th 10-12,
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 242nd 10-12, 243rd 10-12, 244th 10-12, 245th 10-12,
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 250th 10-12, 251st 10-12, 252nd 10-12, 253rd 10-12,
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 262nd 10-12, 263rd 10-12, 264th 10-12, 265th 10-12,
 266th 10-12, 267th 10-12, 268th 10-12, 269th 10-12,
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 298th 10-12, 299th 10-12, 300th 10-12, 301st 10-12,
 302nd 10-12, 303rd 10-12, 304th 10-12, 305th 10-12,
 306th 10-12, 307th 10-12, 308th 10-12, 309th 10-12,
 310th 10-12, 311st 10-12, 312nd 10-12, 313th 10-12,
 314

[illegible]

Shed Aug 24 (VII) Slope as described except
that the lateral furrow runs suddenly up to
not gained, joins into a long slit, concave behind ~

tipped spines clear leaf green, ① 3-5, 13 and
② 3-4 red, 12 palest. Vanner yellowish
line 4-12, a greenish d. cyclical line, under
it a narrower grayish sep. transverse
and line the capsule toward ap. dorsal
ap. sp., the lower touching the pointed dorsal.

1) ~~face~~ lateral one whitish DVS. This
part is somewhat fainter than 3, 4 and 5.
The side the ventral (4) and vent (5)
is white is a single large depressed area
extending to the front of the segment and a
longitudinal bar. The whitish only means white
more the regular present in color. There is
no low white present in the side. The
ventral is directly colored, even to the
adjoining ones. There is no white in the
ventral (1) 3-5. D 3-4 darker than the other. (2) 3-5

The highly decorated, light yellow-green, with
 on little, with a single row of small, white
 is very small, but in a leaf. Height from
 narrow pale yellow line @ 4 1/2 inches. The
 from within between 2 rows of 4 in front. The
 with pale colored line 4-10 (4 leaves) ③③③
 is small (pale), with, very small (2) white of the
 line of between narrow/strip. Height from 5.4
 of a line below first line. The line which
 on 4 1/2 in. large (pale) with narrow area
 at white edge. The line 5.4-6.4 in. The
 the, 1/2 line, all red tipped, 12-14, 12-14 light
 16-18 only very faint. Spine black, with
 were loaded, should be in the last line
 this very long, appearing from the ground, not
 appear to be a single line. The line from a line
 the culture has been in the last line.

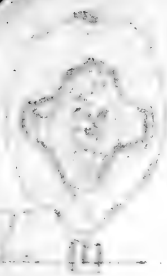
683 (see 55)

Myophanta Aug 2

Big J. *Myophanta* possibly *Myophanta* *Myophanta*
 but all light yellow and brown.
 Hd all suffused with dull purple staining
 the reticulate line enclosing the patches
 of confluent pale dots, to 3.52. Body mostly
 light yellow, green, and a series of yellow
 and olive patches around i-ii to 5-10, and
 11-12 as well as broken red grey line and
 patches around the vent. predorsal line. A
 small brown band with faint pink streaks, a
 space in front of each i-ii patch and around
 to a line between i contains a broken pale d.
 line. Fine olive spots surround the yellow
 dots of 11, ^{breaking a yellow patch} the purple centrally, pink-red on
 the edges around 3 tubercles; tubercles yellow.
 Hairs a little rough except vi, tubercles small.
 Stomach brownish. Very handsome.
 Very tall from h. J. Yellow feet, clay brown.

684

F. larvae on morning glory leaves 21
 Aug 11 1897. Whitish green, a narrow
 dorsal yellowish d. line above it, fine
 red edges; a diffuse broad straight
 brownish white 9d line. Sides slightly
 whitish, no markings. Feet pale, base
 white. On 2d line. Feet short. 10d line
 6, 8 mm. 9d line red, narrow.
 11d line narrow, with a white dorsal
 line below it. But see in
 close observation.



685

[illegible][illegible]

506

[illegible]

General 1st 2. winging 1 on 2 hair and
 seen with lens; a short black tuft 5 &
 12 and trace also a 6; these hair plumbed.
 dorsal hair spiculate black tipped, 5-8
 not with, over long, somewhat feathering.
 Ant. tuft 10. 1. small white hair body.
 Placed between 1 and 11/12 (not 11/12) but not
 not with 12 in ant. 12.

Sh. 11 Sept 7. Hd. 1.3 mm blackish. Body color yellow.
 A blackish d. and sd. band. 11/12 broken and
 dotted showing the c-sh. just, narrow 7-11.
 Tufts 5-12; 1st covering 1st and 2, and
 showing 11/12 and 13. 12. Spotted
 dorsal black pencil 2, and square black
 11/12-5, 6, 12 with some faint white &
 black hair 7, 8. Other hair spiculate, pale
 longer 10, a few long black hair 11. Ant.
 tubercles whitish (all but one bifurcated).
 Other hairs. (about one eating Sept 9)

Sh. 12 Sept 14. Hd. 1.3 mm. New hd 1.1 mm.
 1st. Plumed black pencil 1st 2 and 13.

mixed with short plumed white on 2. When
 length. Small tuft short brown 5-8, black
 12. Res. tufts whitish. (Don't know what 8)

Black tufts 5, 6 and 12. Other hair gray,
 more or less white rounded, glaucous 1st
 dorsal hair to right in the pale wing
 spring tufts - soft long hair 5-8. Body
 yellowish with black shaded head and
 1. dorsal band 5-12, also red 1. 1st
 slightly striated & spotted, a few small
 with pale 1st dorsal. Ant. tubercles whitish.

Sh. 13 June 13 1898 on bark Hd 1.8 mm
 black. Body same but hair rather scant.
 appearance when yellow 1st black marked
 1st 2 + (Hd 1.6) as 1st, also yellow
 1st pencil 2 & 13. 1st 5-8, 6 (Hd 1.7) & 12 and
 slight markings between back & back. Hair
 pale long or white 1st mostly white 3-12
 Ant. tufts white

Sh. 14 June 20. Hd 2.7 mm. Brownish
 when seen and when black d. & back hair the
 1st. ant. 11/12. Hair large, irregular, is about
 long as in dorsal above strip. Black pencil 1
 12 & 13 long slightly feathered with 11/12 hair light yellow
 glaucous white shade 11/12 all hair 1st & 12 & 13
 very white feathered. Black d. tuft short 5, 6 (Hd 2.7)
 12. All same as in small one.
Sh. 15 June 22 Hd 3.5 (Hd 2.75) small and red yellow
 1st 1st black d. & back hair long
 dark pencil 2 & 13. 1st hair not different.
 1st hair long white, not yellowish white

689 = 105

Heligmosa? on white oak (Morpho 2.9
and 2. Longwood) Sept 14, 1897. ^{IV} Hd 1.1 mm
high angular bilobed (color lost as to that).
A pair of high tubercles on c-sh. but all the
others perfectly flat, rarely slightly prominent
as i on 3, 4, i 12 rather large, but flat.
A curved horn on 5 and horn bending on
12. Side of 2 feet 3-4 green but on green
patch dorsally 11-13 behind the faint
yellow V-mark of 11 and before anal plate,
broken across by the horn bending on 12.
Body brown, forming a dark d. 1-5-8 line
on thorax, and a d. shading 8-10, present
on 10 the anterior a rounded white spot
(faint remnant of v); a white spot around
apex of 11; dorsum 6-7 light, whitish,
extending sd on 8; a faint pale lateral
shade. A large pale patch on base of
feet 7-10 around tubercle vi. anal feet
imp. Setae with slender heads as tips.

^{IV} Head Sept 15 - 11.9 x .8 high, notched above, nearly
white, the lower vertical bands joined by 3
low a front, above o, centrally and at vertex,
forming rounded areas of green; an irregular
line down posterior part of cheek, bearing a
large lobed spot on side. Ant horn 5, bending
12. Tubercles rather large, i a little bent and
not smooth, rounded; setae clustered. Color
same; d. green 11-13 center of a brown
line and divided in two by dorsal line.
Lateral green runs forward sd. (not all)
= *Parasema lignea* color

690

Coke from Australia

Bliss Road Jan 18, 1898

Fungus & larvae (much broken off in cutting)

Sed 3	8.5 mm	Head lat 3	1.5 mm
" 4	retrograde	" 4	6 mm curved form
" 5	retrograde		(3 mm up)
" 6	head, etc. etc.	" 6	3 mm tip of horn
" 7	.6 mm	" 7	3 "
" 8	.6 mm	" 8	3 "
" 9	.6 mm	" 9	3 "
" 10	.9 mm	" 10	3 "
" 11	1 mm	" 11	[3 mm?]
" 12	7.5 mm [pieces]	" 12	[3 mm?]
" 13	[3 mm?]		

Structure seems as *Brachymeria leucogaster* Scott

691 = 783

2 eggs laid on spider web on wax berry vine
(*Chrysocoma racemosa*)
over many dead leaves, "Rubber tree" Fla.

Jan 18, 1898. Elliptical rounded, a little
flattened above & below, scarcely shiny, pale creamy
white turning yellow. Under $\frac{1}{2}$ in long with
very obscure angular nets L. .75 or .6 mm
Hatched Jan 22 & hatching like a sil. Sclerites
pale yellowish transverse 3 mm long with
conspicuous large head 4 mm wide, dark
brown at the mouth. No mandibles. Sclerites
thin & not long, dark, normal
not glandular (vi absent)
(not sure of vii or whether one of vii on the other side)
(Jan 24 died)

Stypta animalis Sm

692

Collected on morning glory, several off at
Miami Fla. Jan 19 1898. Petiole in
strong double, at base, tubercles all
entirely concolorous. Flacinae 10 + 1 but
not all others, etc., vii of them. Leg.
shredder, bulbous at tip, castrochab
broken in outside. Uniform green,
shiny, rather thick, segs irregularly
3-angulate well raised. Not very
translucent. Tubercles faint
white spinous. Head
Red 2 + green. Antennae and
flacinae reddish. Red back red on 1 and
lat. Shagreened on sides and
shins a row of small bumps side
of each leg. web.
Jan 16 open mouth
between 2 rows
making cuts in for the P₃ P₄ pieces.
Out Feb 12 1898 Cat. no. 14921

693

Stypta chlorocoma M. Thompson, Worcester
Ma. Jan 19 1898.

No 1		No 2		No 3	
20	11.5	21	11.5	22	11.5
"	21	"	12.0	"	11.8
"	22	"	12.0	"	11.8
"	23	"	12.0	"	11.8
"	24	"	12.0	"	11.8
"	25	"	12.0	"	11.8
"	26	"	12.0	"	11.8
"	27	"	12.0	"	11.8
"	28	"	12.0	"	11.8
"	29	"	12.0	"	11.8
"	30	"	12.0	"	11.8
"	31	"	12.0	"	11.8
"	32	"	12.0	"	11.8
"	33	"	12.0	"	11.8
"	34	"	12.0	"	11.8
"	35	"	12.0	"	11.8
"	36	"	12.0	"	11.8
"	37	"	12.0	"	11.8
"	38	"	12.0	"	11.8
"	39	"	12.0	"	11.8
"	40	"	12.0	"	11.8
"	41	"	12.0	"	11.8
"	42	"	12.0	"	11.8
"	43	"	12.0	"	11.8
"	44	"	12.0	"	11.8
"	45	"	12.0	"	11.8
"	46	"	12.0	"	11.8
"	47	"	12.0	"	11.8
"	48	"	12.0	"	11.8
"	49	"	12.0	"	11.8
"	50	"	12.0	"	11.8
"	51	"	12.0	"	11.8
"	52	"	12.0	"	11.8
"	53	"	12.0	"	11.8
"	54	"	12.0	"	11.8
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"	57	"	12.0	"	11.8
"	58	"	12.0	"	11.8
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"	60	"	12.0	"	11.8
"	61	"	12.0	"	11.8
"	62	"	12.0	"	11.8
"	63	"	12.0	"	11.8
"	64	"	12.0	"	11.8
"	65	"	12.0	"	11.8
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"	67	"	12.0	"	11.8
"	68	"	12.0	"	11.8
"	69	"	12.0	"	11.8
"	70	"	12.0	"	11.8
"	71	"	12.0	"	11.8
"	72	"	12.0	"	11.8
"	73	"	12.0	"	11.8
"	74	"	12.0	"	11.8
"	75	"	12.0	"	11.8
"	76	"	12.0	"	11.8
"	77	"	12.0	"	11.8
"	78	"	12.0	"	11.8
"	79	"	12.0	"	11.8
"	80	"	12.0	"	11.8
"	81	"	12.0	"	11.8
"	82	"	12.0	"	11.8
"	83	"	12.0	"	11.8
"	84	"	12.0	"	11.8
"	85	"	12.0	"	11.8
"	86	"	12.0	"	11.8
"	87	"	12.0	"	11.8
"	88	"	12.0	"	11.8
"	89	"	12.0	"	11.8
"	90	"	12.0	"	11.8
"	91	"	12.0	"	11.8
"	92	"	12.0	"	11.8
"	93	"	12.0	"	11.8
"	94	"	12.0	"	11.8
"	95	"	12.0	"	11.8
"	96	"	12.0	"	11.8
"	97	"	12.0	"	11.8
"	98	"	12.0	"	11.8
"	99	"	12.0	"	11.8
"	100	"	12.0	"	11.8

Wet is light blue green. When dry
very abundant. d. dots of
reddish white. 2 + 3
are yellowish green. Antennae red
Red dots 4, 7, 11 d. Ant. bases red tipped
ill as in vent. Skin is d. green with
minute spinous. Ant. bases red with
small. Back of 1st jointed hair, feathers
hair and stamens also slender black
long in ant. dots of head piece or not.
small opposite incision. The 1st. jointed
below, then with longest larva (ant.)

Mixed

Horns 1 at tip, above 1 at base, with smooth
straight setae with dark tips. The dark horns
have been with base only stiff setae. Skin
body with clear setae from prolegs. Horns
① constructed a little at base but without
separate basal piece. Eats a large green
the inside of the leaf, sitting on it the horns
overlapping on the leaf. In some, under trees
not on 4, 7, 8, 11 or 4, 7, 8, 11 d. or more.
Shiff July shape essentially as 1 but the dorsal
piece broad and shallow. Horns 1-13 of even
length except 7, 9, 11 which are about half as
long as a little are half as long as the others.
Horns tapering, constructed near base, thin rounded
basal piece indicated but not furcate.
Hairs abundant, fine spinules a before with
some smooth dark tipped ones. Tarsal claws
of horns. Prolegs after 11 visible, color all
green, whitish of bases. Skin as before
Horns slender than before and look more
numerous as those of the weak setae.

Feb	7.0	to the	Shy	3-4	in general. Horns
"	"	"	"	"	"
"	7.7	cat	"	"	"
"	7.8	"	"	"	"
"	10.2	"	"	"	"
"	10.5	"	"	"	"
"	10.4	shy	"	"	"
"	11	"	"	"	"
"	11	"	"	"	"
"	11.0	shy	"	"	"
"	11.1	cat	"	"	"
"	12.0	"	"	"	"
"	13.0	"	"	"	"
"	14.0	"	"	"	"
"	14.5	shy	"	"	"
"	15.0	cat	"	"	"

③ Prime false margin = 1 ryzobalanus
isaco, coca plum

Ardisia pickeringii (F. King)

Stemmatisma on "thick leaved stem" and
Hypolepta paniculata (det 1911)

Jan 21 98, Wash. D. C. Edward H. Hove.

4.5 cm Elongate elliptical rather flattened
4.4 cm

4.11.11 not yet done. (Horn 3-13) Long

7.0 11
7.5 12

1137 12.7 1914 Do. ...
1138 " " " ...
1139 " " " ...

Belgium & Holland. 1814 & 1815

1. *Chrysomelidae* (Colorado potato beetle)
 2. *Chrysomelidae* (Colorado potato beetle)

... and ...

Weather: Clear, Wind: S.W., 20-30
 Time: 10:00 AM, Date: 10/10/1910

[Faint handwritten notes at the bottom of the page]

Delays have not constituted and all

Other color 19. Red 20. Blue 21. Yellow 22. Green 23. Brown 24. Black 25. White 26. Grey 27. Pink 28. Purple 29. Orange 30. Silver 31. Gold 32. Bronze 33. Copper 34. Steel 35. Aluminum 36. Plastic 37. Rubber 38. Glass 39. Paper 40. Fabric 41. Wood 42. Metal 43. Stone 44. Brick 45. Concrete 46. Asphalt 47. Cement 48. Sand 49. Gravel 50. Soil 51. Mud 52. Snow 53. Ice 54. Fog 55. Rain 56. Wind 57. Sun 58. Moon 59. Stars 60. Planets 61. Comets 62. Meteors 63. Asteroids 64. Galaxies 65. Nebulae 66. Black holes 67. Dark matter 68. Dark energy 69. Quantum mechanics 70. Relativity 71. Cosmology 72. Astrophysics 73. Geology 74. Biology 75. Chemistry 76. Physics 77. Mathematics 78. Engineering 79. Medicine 80. Law 81. History 82. Literature 83. Art 84. Music 85. Sports 86. Entertainment 87. Technology 88. Science 89. Nature 90. Environment 91. Climate 92. Weather 93. Oceanography 94. Botany 95. Zoology 96. Ecology 97. Evolution 98. Genetics 99. Microbiology 100. Immunology 101. Pathology 102. Pharmacology 103. Toxicology 104. Forensic science 105. Archaeology 106. Anthropology 107. Linguistics 108. Sociology 109. Psychology 110. Psychiatry 111. Behavioral science 112. Neuroscience 113. Cognitive science 114. Interdisciplinary studies 115. Transdisciplinary research 116. Systems thinking 117. Complexity theory 118. Chaos theory 119. Fractal geometry 120. Nonlinear dynamics 121. Complex networks 122. Adaptive systems 123. Self-organizing systems 124. Emergent phenomena 125. Synergistic effects 126. Holistic approaches 127. Integrative frameworks 128. Multiscale modeling 129. Cross-scale interactions 130. Transdisciplinary collaboration 131. Interdisciplinary dialogue 132. Collaborative research 133. Open science 134. Citizen science 135. Participatory research 136. Community-based research 137. Transdisciplinary education 138. Interdisciplinary training 139. Collaborative learning 140. Open education 141. Digital learning 142. Online education 143. E-learning 144. Distance education 145. Virtual learning 146. Immersive learning 147. Augmented reality 148. Virtual reality 149. Mixed reality 150. Extended reality 151. Smart learning 152. Intelligent tutoring systems 153. Adaptive learning 154. Personalized learning 155. Customized education 156. Individualized instruction 157. Differentiated instruction 158. Competency-based education 159. Outcome-based education 160. Performance-based learning 161. Authentic learning 162. Real-world learning 163. Experiential learning 164. Inquiry-based learning 165. Problem-based learning 166. Project-based learning 167. Service learning 168. Community service 169. Social entrepreneurship 170. Social innovation 171. Social impact 172. Social responsibility 173. Corporate social responsibility 174. Environmental social responsibility 175. Human rights 176. Labor rights 177. Consumer rights 178. Data rights 179. Privacy rights 180. Intellectual property rights 181. Creative Commons 182. Open Access 183. Creative Commons Attribution 184. Creative Commons Attribution-NonCommercial 185. Creative Commons Attribution-ShareAlike 186. Creative Commons License 187. Creative Commons License 188. Creative Commons License 189. Creative Commons License 190. Creative Commons License 191. Creative Commons License 192. Creative Commons License 193. Creative Commons License 194. Creative Commons License 195. Creative Commons License 196. Creative Commons License 197. Creative Commons License 198. Creative Commons License 199. Creative Commons License 200. Creative Commons License 201. Creative Commons License 202. Creative Commons License 203. Creative Commons License 204. Creative Commons License 205. Creative Commons License 206. Creative Commons License 207. Creative Commons License 208. Creative Commons License 209. Creative Commons License 210. Creative Commons License 211. Creative Commons License 212. Creative Commons License 213. Creative Commons License 214. Creative Commons License 215. Creative Commons License 216. Creative Commons License 217. Creative Commons License 218. Creative Commons License 219. Creative Commons License 220. Creative Commons License 221. Creative Commons License 222. Creative Commons License 223. Creative Commons License 224. Creative Commons License 225. Creative Commons License 226. Creative Commons License 227. Creative Commons License 228. Creative Commons License 229. Creative Commons License 230. Creative Commons License 231. Creative Commons License 232. Creative Commons License 233. Creative Commons License 234. Creative Commons License 235. Creative Commons License 236. Creative Commons License 237. Creative Commons License 238. Creative Commons License 239. Creative Commons License 240. Creative Commons License 241. Creative Commons License 242. Creative Commons License 243. Creative Commons License 244. Creative Commons License 245. Creative Commons License 246. Creative Commons License 247. Creative Commons License 248. Creative Commons License 249. Creative Commons License 250. Creative Commons License 251. Creative Commons License 252. Creative Commons License 253. Creative Commons License 254. Creative Commons License 255. Creative Commons License 256. Creative Commons License 257. Creative Commons License 258. Creative Commons License 259. Creative Commons License 260. Creative Commons License 261. Creative Commons License 262. Creative Commons License 263. Creative Commons License 264. Creative Commons License 265. Creative Commons License 266. Creative Commons License 267. Creative Commons License 268. Creative Commons License 269. Creative Commons License 270. Creative Commons License 271. Creative Commons License 272. Creative Commons License 273. Creative Commons License 274. Creative Commons License 275. Creative Commons License 276. Creative Commons License 277. Creative Commons License 278. Creative Commons License 279. Creative Commons License 280. Creative Commons License 281. Creative Commons License 282. Creative Commons License 283. Creative Commons License 284. Creative Commons License 285. Creative Commons License 286. Creative Commons License 287. Creative Commons License 288. Creative Commons License 289. Creative Commons License 290. Creative Commons License 291. Creative Commons License 292. Creative Commons License 293. Creative Commons License 294. Creative Commons License 295. Creative Commons License 296. Creative Commons License 297. Creative Commons License 298. Creative Commons License 299. Creative Commons License 300. Creative Commons License 301. Creative Commons License 302. Creative Commons License 303. Creative Commons License 304. Creative Commons License 305. Creative Commons License 306. Creative Commons License 307. Creative Commons License 308. Creative Commons License 309. Creative Commons License 310. Creative Commons License 311. Creative Commons License 312. Creative Commons License 313. Creative Commons License 314. Creative Commons License 315. Creative Commons License 316. Creative Commons License 317. Creative Commons License 318. Creative Commons License 319. Creative Commons License 320. Creative Commons License 321. Creative Commons License 322. Creative Commons License 323. Creative Commons License 324. Creative Commons License 325. Creative Commons License 326. Creative Commons License 327. Creative Commons License 328. Creative Commons License 329. Creative Commons License 330. Creative Commons License 331. Creative Commons License 332. Creative Commons License 333. Creative Commons License 334. Creative Commons License 335. Creative Commons License 336. Creative Commons License 337. Creative Commons License 338. Creative Commons License 339. Creative Commons License 340. Creative Commons License 341. Creative Commons License 342. Creative Commons License 343. Creative Commons License 344. Creative Commons License 345. Creative Commons License 346. Creative Commons License 347. Creative Commons License 348. Creative Commons License 349. Creative Commons License 350. Creative Commons License 351. Creative Commons License 352. Creative Commons License 353. Creative Commons License 354. Creative Commons License 355. Creative Commons License 356. Creative Commons License 357. Creative Commons License 358. Creative Commons License 359. Creative Commons License 360. Creative Commons License 361. Creative Commons License 362. Creative Commons License 363. Creative Commons License 364. Creative Commons License 365. Creative Commons License 366. Creative Commons License 367. Creative Commons License 368. Creative Commons License 369. Creative Commons License 370. Creative Commons License 371. Creative Commons License 372. Creative Commons License 373. Creative Commons License 374. Creative Commons License 375. Creative Commons License 376. Creative Commons License 377. Creative Commons License 378. Creative Commons License 379. Creative Commons License 380. Creative Commons License 381. Creative Commons License 382. Creative Commons License 383. Creative Commons License 384. Creative Commons License 385. Creative Commons License 386. Creative Commons License 387. Creative Commons License 388. Creative Commons License 389. Creative Commons License 390. Creative Commons License 391. Creative Commons License 392. Creative Commons License 393. Creative Commons License 394. Creative Commons License 395. Creative Commons License 396. Creative Commons License 397. Creative Commons License 398. Creative Commons License 399. Creative Commons License 400. Creative Commons License 401. Creative Commons License 402. Creative Commons License 403. Creative Commons License 404. Creative Commons License 405. Creative Commons License 406. Creative Commons License 407. Creative Commons License 408. Creative Commons License 409. Creative Commons License 410. Creative Commons License 411. Creative Commons License 412. Creative Commons License 413. Creative Commons License 414. Creative Commons License 415. Creative Commons License 416. Creative Commons License 417. Creative Commons License 418. Creative Commons License 419. Creative Commons License 420. Creative Commons License 421. Creative Commons License 422. Creative Commons License 423. Creative Commons License 424. Creative Commons License 425. Creative Commons License 426. Creative Commons License 427. Creative Commons License 428. Creative Commons License 429. Creative Commons License 430. Creative Commons License 431. Creative Commons License 432. Creative Commons License 433. Creative Commons License 434. Creative Commons License 435. Creative Commons License 436. Creative Commons License 437. Creative Commons License 438. Creative Commons License 439. Creative Commons License 440. Creative Commons License 441. Creative Commons License 442. Creative Commons License 443. Creative Commons License 444. Creative Commons License 445. Creative Commons License 446. Creative Commons License 447. Creative Commons License 448. Creative Commons License 449. Creative Commons License 450. Creative Commons License 451. Creative Commons License 452. Creative Commons License 453. Creative Commons License 454. Creative Commons License 455. Creative Commons License 456. Creative Commons License 457. Creative Commons License 458. Creative Commons License 459. Creative Commons License 460. Creative Commons License 461. Creative Commons License 462. Creative Commons License 463. Creative Commons License 464. Creative Commons License 465. Creative Commons License 466. Creative Commons License 467. Creative Commons License 468. Creative Commons License 469. Creative Commons License 470. Creative Commons License 471. Creative Commons License 472. Creative Commons License 473. Creative Commons License 474. Creative Commons License 475. Creative Commons License 476. Creative Commons License 477. Creative Commons License 478. Creative Commons License 479. Creative Commons License 480. Creative Commons License 481. Creative Commons License 482. Creative Commons License 483. Creative Commons License 484. Creative Commons License 485. Creative Commons License 486. Creative Commons License 487. Creative Commons License 488. Creative Commons License 489. Creative Commons License 490. Creative Commons License 491. Creative Commons License 492. Creative Commons License 493. Creative Commons License 494. Creative Commons License 495. Creative Commons License 496. Creative Commons License 497. Creative Commons License 498. Creative Commons License 499. Creative Commons License 500. Creative Commons License 501. Creative Commons License 502. Creative Commons License 503. Creative Commons License 504. Creative Commons License 505. Creative Commons License 506. Creative Commons License 507. Creative Commons License 508. Creative Commons License 509. Creative Commons License 510. Creative Commons License 511. Creative Commons License 512. Creative Commons License 513. Creative Commons License 514. Creative Commons License 515. Creative Commons License 516. Creative Commons License 517. Creative Commons License 518. Creative Commons License 519. Creative Commons License 520. Creative Commons License 521. Creative Commons License 522. Creative Commons License 523. Creative Commons License 524. Creative Commons License 525. Creative Commons License 526. Creative Commons License 527. Creative Commons License 528. Creative Commons License 529. Creative Commons License 530. Creative Commons License 531. Creative Commons License 532. Creative Commons License 533. Creative Commons License 534. Creative Commons License 535. Creative Commons License 536. Creative Commons License 537. Creative Commons License 538. Creative Commons License 539. Creative Commons License 540. Creative Commons License 541. Creative Commons License 542. Creative Commons License 543. Creative Commons License 544. Creative Commons License 545. Creative Commons License 546. Creative Commons License 547. Creative Commons License 548. Creative Commons License 549. Creative Commons License 550. Creative Commons License 551. Creative Commons License 552. Creative Commons License 553. Creative Commons License 554. Creative Commons License 555. Creative Commons License 556. Creative Commons License 557. Creative Commons License 558. Creative Commons License 559. Creative Commons License 560. Creative Commons License 561. Creative Commons License 562. Creative

all but blue green, brown light green above, white below.

V Feb 13 (eating whole lot) sharp & moist, all time.

at 300 yds. thick shale & clay very common
more distant common: (see list of fossils)

but shaped at first like a regular hexagon.

rounded at top densely clothed with long fine
like human hair. All

dark fringe hairs. There are also some short
mouth dark black setae and short

lately feathered. It is the same as the one in the

and then, a corner station, and a large bay

1000 ft. 2000 ft. 3000 ft. 4000 ft. 5000 ft. 6000 ft. 7000 ft. 8000 ft. 9000 ft. 10000 ft. 11000 ft. 12000 ft. 13000 ft. 14000 ft. 15000 ft. 16000 ft. 17000 ft. 18000 ft. 19000 ft. 20000 ft. 21000 ft. 22000 ft. 23000 ft. 24000 ft. 25000 ft. 26000 ft. 27000 ft. 28000 ft. 29000 ft. 30000 ft. 31000 ft. 32000 ft. 33000 ft. 34000 ft. 35000 ft. 36000 ft. 37000 ft. 38000 ft. 39000 ft. 40000 ft. 41000 ft. 42000 ft. 43000 ft. 44000 ft. 45000 ft. 46000 ft. 47000 ft. 48000 ft. 49000 ft. 50000 ft. 51000 ft. 52000 ft. 53000 ft. 54000 ft. 55000 ft. 56000 ft. 57000 ft. 58000 ft. 59000 ft. 60000 ft. 61000 ft. 62000 ft. 63000 ft. 64000 ft. 65000 ft. 66000 ft. 67000 ft. 68000 ft. 69000 ft. 70000 ft. 71000 ft. 72000 ft. 73000 ft. 74000 ft. 75000 ft. 76000 ft. 77000 ft. 78000 ft. 79000 ft. 80000 ft. 81000 ft. 82000 ft. 83000 ft. 84000 ft. 85000 ft. 86000 ft. 87000 ft. 88000 ft. 89000 ft. 90000 ft. 91000 ft. 92000 ft. 93000 ft. 94000 ft. 95000 ft. 96000 ft. 97000 ft. 98000 ft. 99000 ft. 100000 ft. 101000 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ft. 466000 ft. 467000 ft.

most of last but not of the V. the others

Shed Feb 21 VI. Shape as in next. Fine.

White hairs are dense along sides of (B)

turns on both sides not bend & the short

or star-shaped ones. They are not thick.

At the base are 10 m. of 4.

Topps have one common shell and are
said to be the same as the ones found

not visible except on base of 3 km.

How is a birth certificate important?

the green, what's the green have. Up & down

have a slight orange tint. all like

mut. except here I put 20 plant in canoe

and red marbled, whitish. The short smooth

...the reversing of the original long

ves & the stem-like brain and the genital

Long of forest except of burn made short.

Mar 28	15.5 in	cut	Mar 4	14.7 cut
Mar 1	15	"	" 5	Shrink made white dot

1	15	11	Spun in the P.M.
2	11	11	
3	16	11	

other (5 yrs) 10.2, 10.3, 10, 10, 10.4. (One just

Had 8.8 mm, like last stage, probably not same.

Case 13.5 5th ed - Duke University

Horn fairly regenerate when broken off

before last stage

Calc .40 .67 1.11 1.85 3.08 $\frac{6}{10}$
 Found 4 .7 1.2 1.8 3.

694 =

Egg larvae of *Pieris monuste* on poplar
 Miami Fla Jan 23, 1898.

Egg. Fusiform, rather thick, 1.1 x .6 mm
 10-11 ribbed, finely transversely wrinkled,
 scarcely striate. Apex small truncate.

Stage I Hd. 4 pale yellow, shiny. Body yellowish
 with distinct dusky tubercles and stiff
 blackish setae which are sticky and

green of sand adheres to
 them. Body uniform, thick.

12 a little larger. Feet short.
 (Hd. 4 (ishus) Same but tubercle i and iii are
 conspicuously black. The body is greenish
 with faint yellow sd and stig stripes.

Hair sticky as at first faintly blackish.
 Hd 7 mm rounded, orange yellow, the curved white
 setae from distinct tubercles, making a dark
 line on the neck at the sides. Body cylindrical
 green with faint yellow sd & stig line.
 Feet less green. Tubercles i, iii, & large &

black and many small 2^d been all
 from blackish tubercles. Csh divided
 black. Hair all pale with slightly
 enlarged tips. Legs about 4-annulate, a
 large annulet carrying i. Yellow line nearly
 divided of the black dots. Feet short.

Hd 1.8 mm Hd greenish yellow, shaded with
 orange behind & more deeply each side. A
 tubercle 1st & 2^d black conic, with white &
 black hair of various lengths. Body thick
 & cylindrical legs 6-annulate, 1 annulet large
 green, head dotted with black. Tubercle
 i and iii still conspicuously large. Brown
 green with faint yellowish d. line; sd
 and stig line more distinct, orange yellow.
 The space between blue gray. Hair 1st & 2^d
 of various lengths, some long simple, most
 black d. and white lat, 1st almost entire
 obscured. Feet short, normal. Tubercles of
 conical shield high conic. 13 square behind.
 Hd 1.2 mm Green a little orange shaded

with black tubercles 1st & 2^d and white
anterior body green, the space between yellow
dorsal lines & black tubercles. Many
1st & 2^d black tubercles 1 & III large &
with central points. There is a 3rd
conical, all black. Setae short, black
& white, glandular with drops of moisture
not swollen at tip. 1st & 2^d glandular & swollen
black. 3rd yellow green, 4th black, orange
cast side and a neck at side. Tubercles
all black and also some fine black dots
setae white, 1 cap long. Body black green
with black tubercles, 1 & III large,
there is a 3rd conical. 4th thin narrow, 5th
a long broad, yellow the last 2 orange
tinted, from yellow green just about
them, last region grayish between 1st &
2^d & 3rd 5th region yellowish, feet pale
anterior feet forked, consisting of 2 conical
long projections. Setae short, black &
white & some of the 2^d very narrow

like pale. All the largest tubercles
are conical or have central cones.
T. Jan 33 legs joint. With first and meso-
thorax tuft. A high dorsal keel on the
mesothorax and small one on abdomen,
a small projection between eyes and
a paired one above base of antenna case
a slender thorn-like appendage 5th on
3rd abd seg. next to wing case. Creamy
white, 4th carina and a red line
faintly orange tinted; a broader black
patch on abd. & prothorax, another on
posterior half of mesothorax, a broad band
along int. border of wing and running a
submarginal band round to apex.
Beside this there are a number of
scattered black dots largest at post. on
legs and a 2nd stripe. Length 25 mm
Ant. Feb 11, 1908 Cat no 14900
Same species. Dr. W. K. King, Palm Beach
Fla. May 5 1900. A Cat. has Cynophthalmus
plum!

Call 4 .61 .93 1.4 2.15 ret. 66
 Food 3 .6 .9 1.4 1.7 2.15 " 87
 (1.74) NW 9 1899

695 *Thevetia peruviana*

Success in various leaves milky, thick (not)
 in cemetery, Key West Fla. Jan. 26, 1898
 let up a group of leaves in a tube and
 pump them out. Spin in similar tube.
 Sublimous leaves pale blue,
 shining, a broad deep orange stripe
 between it will about in 2, broken
 into spots on 3 & 4. Tubercles very
 large, shining black. (1.74) (1.75) (1.76)
 normal for Ropalidae. (1.77) (1.78) (1.79)
 The feet black, abd. slender. Blue
 1.74 1.75 1.76 1.77 1.78 1.79
 7.6 mm. (1.74) (1.75) (1.76) (1.77) (1.78) (1.79)
 2.15 orange tinted same.
 1.74 1.75 1.76 1.77 1.78 1.79
 very pale brown. Body transparent green,
 prolegs with dusky wavy, i-v present,
 on vi (vi) not seen. A faint
 trace of orange on 1.74. (1.75) (1.76) (1.77) (1.78) (1.79)
 (1.74) (1.75) (1.76) (1.77) (1.78) (1.79)
 pale brown. Body transparent green.

fine food with large black tubercles
 supper. present. Slender, shiny, broad
 line visible a trace of the broad
 sd very round not as a crawling
 but seen with lens near extremities
 later moved and noticed but broken.
 shed Jan 31 Hd. 9 like mature, pale blue
 but look dirty green from the food. (Shed 9)
 shed Feb 4 Hd 1.4 mm Same (but not) at noon

Imag Feb 6 1898 Cat. No. 14896 ✓

Marginalis flegia Cr
 vide Hps. Br Zool Soc 1898 p 732

just given Parot's Hb. Ex Sch
 30 1125 ✓

Calc. .5 .82 1.34 2.2 3.6 int. 61
 Poned .33 1. 1.4 2.2 3.6

696

198

Pamplula ethlius? on *Cauna* a ground
 Hotel Royal Palm, Miami, Fla. June 28/91
 from Mr. Slosser & Dr. Brinn.

Eggs scattered on either side of the leaf
 singly. Almost perfectly hemispherical
 like *Notodontina*. White, opaque not
 shiny with a neat shade tint of green
 which disappears before giving place to
 reddish. All minutely granular, white
 granular as in *Notodonta*, micropyle puncti-
 form, depressed. Diameter 1 mm, height .6 mm.
 Hd 1 mm in length folded back. Hd subconic,
 tapering above with small notched notch
 $2\frac{1}{2}$ times as wide as high, smooth.
 Dark brown, the color reticulate - the dots
 very pale translucent. 2 small, a narrow
 black transverse cth. Body rounded to thick
 a little flattened behind tapering before
 to 2, a faint ridge. Sps with
 fine annulate feet, all 5, unanated.

June 28/91 198 Cat. no 14892

shined dark pilose, on cth had a sd
 paired dark seta. transparent, no color
 food dark green, tracheae whitest distinct
 the ramifications plainly showing
 The feet small, black, ventral all concolorous
 Hd 2.2 3 mm in size. Hd very small
 high, narrowing, slightly notched, pilose
 Dull, lustrous brown, rather shiny, smooth
 Body thick, tapering before & more sudden
 behind 7-8 annulate, annules 1 very large
 slightly shiny, unanated black pilose
 the pale from black tubercles.
 cth narrow transverse black, prespinal
 tubercle black, a whitish spot below it.
 The feet small, black ^{unpl} thickened into
 a thin pad, not pigmented. Body per-
 fectly transparent. Stomach whitish
 dark green, edges of d. vessel, 2 plates
 and tracheae yellowish white, the spiracle
 with dense radiating tracheae. SV
 ridge & feet a little whitish, but no

fat granules or very prominent. Larva
blackish green but wholly from food & blood.
Hd 3.6 (Hd on corn 3.6) rounded Δ , notched
at vertex, small; caramel tinted white,
brownish at apex, a Δ black spot in apex
of clypeus, rounded spot on ocelli, jaws
black, not shiny, a little blue green,
pale olivaceous. Body very large &
thick 50 mm long, flattens at large
muscular plates, tapering before to 2
cm. sh. obsolete except a black dot at
each side. Spinifer large, white, cap.
the one on. Thor feet 2 black, the
other white. Legs annulate behind,
pile small & obsolete. Tubercles
whitish. Very transparent blood watery,
food in stomach. Food green. Stomach
dilated, tracheae both on skin and
stomach, sex glands etc all plainly
visible. A diffuse white s-d stripe
of pigment on skin, s-v fold narrow

whitish. A snowy mealy patch on
each side of vertex of 11 & 12. Spiracles
of 12 a little higher up, with short dense
radiating tracheae. 4 glands on 10 an
oblique stringy line. Ldg of 13 pale
folds over part of leaf or 2 winter cuts.
Pupa slender cylindrical a little thick
ext through mesothorax, last 2 seg. taper-
ing. Eyes large, prominent, a long black
horn arising between them, rounded
a little at top. Cases reaching 3rd abd.
a long slender torpae case reaching
back 21 mm or 15 mm beyond the end
of the cremaster. Legs of ^{Stage 8-10} 4-6 abd segs
represented by little patches of cornuous
scales. 3 movable processes. Cremaster
long, hollowed below at base with
many terminal hooks. Pale green with
white horn, a curved blackish bar
between the eyes, horn dark red, a
set of black dots in abdomen in the

not generally in line, remote.

narrowed posteriorly of tubercles i, ii and
V of larva, a pair of dots on prothorax,
and 1 on each sternum sd. [of abd segl.
only ii; q 2+3 i, ii; q 4-6 i, ii, x; q 7 i, ii;
q 8 in its apical spicula but a scar
left. 7 skin was completed November
40 mm x 7.5 mm; horn 3 mm. To head
spring up a large field of a look of silk
and a band for crickets which
in whole part to center of a cross
thrust -

Hd 1.4. Dark brown, fine reticulate like
 an enlarged egg. Body, as before. Dark
 brown to yellow. transparent dark green
 from first pinacle conspicuous. Sixth
 elevated. Hd small, body 10 mm. Shield
 narrow black, anal pl. concolorous.

Head 53 - by 2 teeth in cleft of leaf - T on back
 Hd rounded conic, black brown, shiny, not notched
 2 rather small, narrow black cph; rest clear white
 translucent, like fern frond, spiracle 1/2 large
 conspicuous, whitish. did not shiny setae not
 over with hairs. wing clear with 1/2 in stig.

697-185 *Pisonia*

Looper on small bush at Palm Beach also on
thorny red-leaf vine ⑤ Key West, Fla Jan 1898
Slender, smooth, feet normal; hd. 2n
round, pale gray with dark gray mottled
spots. Body mottled with light and
dark gray with a tinge of reddish
like bark. Pale on front half of segs.
and a dorsal Δ mark on back part
the center d. shading into black. Most
strongly on 8 & 9; black mottling also
a ss ridge on 8 & 9 post and living
the post of 10 before & behind. There
are also small dots & mottling of
black all over. Rather uniform, not
conspicuously marked. In lines.
sent down for 11

698

Pholus salicicola
(nymph)

Ingraves. Micro webbing up and feeding
leaves of a bush in fine lawn (6) N.P. 11
Labrador, Feb 1 1898. In center of web
a firm, tube 1' wide and firm. Pupae then
slender, abd. segs rather elongate,
ii & v approximate antennae, not
joined, vi feet, iii in line, (Tineid)
Hd 1.5- very pale & slightly brown dotted
Body with many longitudinal fine
brown lines, 6 on each side of varying
distances. Dorsal dark, narrow, a
broad dark shade of 3rd & 4th line below
tubercles i and iii. Lateral region below
this paler. Setae long, fine dusky.
Csh very large but colorless. Prothorax
has a fine brown track. Retreats into
sinner tube emerging in the web to feed.
[Hd 1.5 same] At next (1.5) turns all dark
green, dorsal brownish. On 1st dark shade
showing but lines all obscured.

Found on 100 ft - 10 ft - 14/9/1

like this. The larva makes circular areas and
attaches the detached pieces to the case, leaving holes
in the leaf. Sometimes the last time.
Not other regular young case (1st and
at Miami) 699

off a mangrove Nassau N.P. 3 miles west
of the town near the sea. Solitary on back
of leaf, perhaps side. Borders elliptical
rather too thick and visible. Pale
yellow centrally with dark brown and
brown shading. 1.2 x 1.0 x .15 mm.
Faint linear reticulate angular and
irregular, also fine crinkled shaped
between the nets. Found Feb 2, 1898.

Hatched Feb 6. Little active slender Tineid.
Hd blackish brown, not with distinct light A.
shiny; w. 2.5 mm Body shiny pale brown,
immaculate, not very transparent. Setae
fine & obscure but fairly long. Setae with
enlarged tips, ii well below i, ii & v approx
& small subprothoracic tubercles absent. Anal pl.
concolorous, csh dark with irregular edge
like a back of leaf, missing, a webbed up mass of
grass at the opening.

Next case on mangrove, a flexible web tube 6 mm long
with fine brown base with several circular pieces of
dried leaf attached to its edge [7 pieces] at narrow part of the
tube. The whole attached at one end to the center of a
smaller crinkled surface a back of leaf tube a thick.

700

Miami, Fla

off by *Chironomus* *tenax*? (Cat. no. 14881)

Jan 30 1898. Elliptical, flattened a little
above, below $1.5 \times 1.4 \times 1.2$ mm. Pale green,
smooth, slightly shining. Under $\frac{1}{2}$ in obp.
dorsal, reticulate-shining in the light light
as pale, rather broad lines in nearly square
meshes, the surface also finely shagreened.

Hatched Feb 5. Larva, pale greenish yellow
3.7 mm long with a small erect long, thick
black horn 2.6 mm, smooth, pilose, slight
post tip. A reddish shade at base of horn before
and behind. Hd round, even with 2 not shiny
concolorous setae slender, ~~and~~

slender, simple, not at all
plumose, on 2nd present. A

Legs faint not very distinct.

Scarcely a slight s-s ridge.

700 $\frac{1}{2}$ = 682

July 4 1898

Egg by *q. nazoni* June 29 P.M. 1898
Elliptical, flat, very large, shining above,
translucent below. Retention
distinct, lines irregular, gran-
ularly spiculate. $2 \times 1.6 \times .1$ mm
Hatched July 10. Larva kept at Bellport
where it was cool not till July 14.

701

Paralid borne in stems of shrub seen from
on beach Nassau, N.P. Feb 6 1898.

Ed. 4 part, under a pale brown mottled
with darker brown on each lobe turned D.

Ed. 4 part, under a pale brown mottled
with darker brown on each lobe turned D.

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with darker brown on each lobe turned D.

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with darker brown on each lobe turned D.

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with darker brown on each lobe turned D.

702

Ed. 4 part, under a pale brown mottled
with darker brown on each lobe turned D.

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with darker brown on each lobe turned D.

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with darker brown on each lobe turned D.

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with darker brown on each lobe turned D.

Ed. 4 part, under a pale brown mottled
with darker brown on each lobe turned D.

Apr 25
1900

Antward 8 1898 Cat. no. 4923

Hatch 7/13 (alcohol N.S.N. M.)

subprimary tubercles not seen
Cat nos 14928-9

703

from with large
dark tubercles

Leaf miner on "wild coffee" Nassau, N.P.
Feb. 11, 1898. Mine under the upper epidermis
which is simply split off as a thin film
the larva eating out the parenchyma below it
leaving all the veins. First a tortuous mine
linear, white with a brown central line,
growing from .6 at egg puncture to 1.2 mm.
Then suddenly a large blotch 6 x 15 mm.
then partly covering the first burrow, first
split off, finally all packed below
mine contains loose grass.

Hd. brown much narrower than 2, darker, the jaw
and 7 indented brown a water darkest. Body
flattened incision distinct eyes rounded and non-
liform, 2 large with large dark cor and a
dark dorsal area also on 3. The feet short
dark and projecting far laterally.
Hd. feet small on 7-9 more seen on 10, small
on 11. Antennae like that with feet. Setae round
long but fine and obscure. Pale, iii done in a \square .
Hd. v a line remote & apparently a little higher
than iv. A d. bordered area on all the legs
which are a little higher, also abd. but not at
anterior. 3 darkened distinct.

Setiodes bahamensis Dyar
245/99 nsp

704

Little Pygmy-like in a bear-like Anulopsis
Nassau, N.P. Feb. 11, 1898. Flattened as usual
thick & rather square, feet normal, 5-
wants a dorsal, 4 on abd. low, simply tuft
of short dark hairs with 3 or 4 long pale
one at the intermediate. Centrally blue-
white, a dorsal 2 s-d (one above & one below
iii) and a s-v (between iv & v) straight, narrow.
Purple-brown lines connected and by a
transverse band a s-g ends light red
i-c 2-4, 12-13, a conspicuous pale yellow
spot behind i & ii of 12 like a pair of
eyes, 13 and also 2+4 rather broken up
by pale spots but not much contrasting.
Hd in the head about 1 mm or a little over
skin clean glabrous; hairs smooth. Jointed
not bellows. 2 & 1 mm Feb 14 spin the
larva to pupa white web of flower and silk
Oct June 8, 1898. Cat. no. 15032

705

egg of *Heteropneustes cucullatus* from cocoon
from Ständiger. Hatched April 10 1895
(first of heat of cocoon?) Egg April 11
Elongate elliptical, rather narrow and
somewhat thick, whitish translucent
in glass. Shiny. A water drop on leaf
5 x 7 mm. Ret. brown, spreading
very obscure, in light light as dark brown
all over. Got another hatched April 19 '95

706

Leaf miner on the weeden Prunus,
 Russett on Apr 17 1898. Saw out of
 mine eating into a new needle.
 Head and large s.h. black. Body
 all dark brown, joint 13 pale. Segs
 with transverse ^{lines} crease behind and
 not rounded distinct. Setae very fine
 from top pale whitish & short.

from small weeden Prunus,
 elevated weeden Prunus Prunus
 Setae. cannot see vi
 or more for it. but 2 or 3 setae also
 base of leg. Segs short, nothing to
 be seen on them. Spiracles not
 seen, but probably above the apophysis
 minute iv-v.

707
 2.2 2.6 3.4

707

3 elegant Paragryllus from Wm. H. H. H.
Jacksonville Fla., April 19 1898
^{Sh. 2.2 2.6}
 Hds 2.1, 2.1, 2.5 ± on Aphelandra
 etc, etc. etc. Yel. apophysis, black
 pencil on 2 & 13, many black end
 plumes, brown tufts on 5-6-7 and 12
 all alike. Exserted part of ant. tufts.
 white, & reddish brown ring.

Head black, body dark gray, mottled &
 white with white sp. ant. Bush
 tuft thick compact, same as 5. a
 5-11, the dorsal hair spring. Black
 space. Hair of iii black stiff + a few
 plumed white + the few black pencil
 hair. V & vi bear long dense ^{Indian} feathered
 white hair in a 2-v fringe, v also
 a few plumed black ones.

On Apr 23 Sam, tufts all brown,
 pencil black, 2 & 13, many side

Plumes: sd row of white short
plumes; tubercles pale, oblong nodules
new heads 3.9 and 2.5 ± Late tufts
neat black, not quite as dense as
pencil, more smoky, otherwise same
with short April 25. Hd. 4 (skhd 2.3)
Pencil black, tufts all alike smoky
black. Lateral hairs whitish, very
thick scattered full of single black
plumed hairs.


End May 8 (Hd 3.4) new head 4 ±
Same. [see bird - note]

Moth came out curvimaacula!

Dr. Thaxter has briefly described the mature larva.

708

Oct 14 '18

Egg of Calocampa maifera through Dr. Ottholengus. Hemispherical  rounded, strongly vertically ribbed, beaded, with very close conic spines. Ribs about 40, close diminishing intercalate fine beaded. D. 8 H. 5

Hatched May 7 Head round, pale, shiny w. 4 Body slender, slightly looking, abd. fat of 7 & 8 much smaller than others esp. 7. 12 a little enlarged. Roof smooth, light green, feet visible, tubercle large ^{very blunt} macula i-v, iv equidistant iii & v, setae dark, distinct but short. 6th horn, on anal plate all along & turned pale greenish. Feet green.

Shed May 11 Very slender, 7-8 feet very small. 1st to 6th pale greenish (unspotted), head and legs as dark green with narrow white ^{border} at sides and along dorsal edge very distinct. Tubercle minute, setae distinct dark brown.

1st to 6th lower edge of spiracles the same as above. 7th & 8th black. 9th very dark, almost annulate.

Eat out at night in last stage

One down June 7 (by black box)

Cult in August Cal no. 15156

Shed May 16 Hd 1.0 (white green not shiny) cells black ^{very faint} brown. Body green & line straight white, creamily edged, i-iii white, sd line straight narrow white; ii & iv less distinct white, sd line distinct white. Moderately broad, somewhat broader below, feet pale. It is a very slender.

Feet 7-8 smaller than 9-10. feet covering spiracles.

Shed May 19 Hd 1.0 all pale green, 12 a little enlarged, feet scarcely enlarged.

^{very slender} Body ^{rather} slender & narrow, ^{rather} macula i-v, iv equidistant iii & v, setae dark, distinct but short. 6th horn, on anal plate all along & turned pale greenish. Feet green.

Shed May 22 Hd 1.0 all pale green, 12 a little enlarged, feet scarcely enlarged. Body slender & narrow, ^{rather} macula i-v, iv equidistant iii & v, setae dark, distinct but short. 6th horn, on anal plate all along & turned pale greenish. Feet green.

Shed May 25 Hd 1.0 all pale green, 12 a little enlarged, feet scarcely enlarged. Body slender & narrow, ^{rather} macula i-v, iv equidistant iii & v, setae dark, distinct but short. 6th horn, on anal plate all along & turned pale greenish. Feet green.

...all over, from shoulder to ... antennae ... only 3 or 4 in all ...

...about, double at ... edges ...
 narrow faint, $\frac{1}{2}$ as wide as d, sky narrow
 about width of spiracles which is half ...
 ... containing it which is ...
 lower edge of spiracles, a dark green ...
 above the line, diffuse, faint ...
 SV white dots, feet clear green, equal.
 ... 12 slightly enlarged. ...
 ... spiracles white, black ...
 shed May 26 Hds 4.6 pale brown, ...
 ... with ... brown ...
 ... taken ...
 ... the ...
 body light yellow ...
 ... white ...
 ... brown, narrow
 passing between the whitest ...
 dotted with whitish. ...
 ... edges, ...
 ...
 spiracles ...
 ...
 white ...
 not lined. Spiracles white, black ...
 feet equal. 12 a little enlarged ...
 shed ...
 pale ...
 ...

... 11.5 ...
 ... 12.5 ...
 ... 11.6 ...
 ... 11.5 ...

709

Egg of *Alphidius avellanae* from ...
 from ... May 19 1898. Elliptical.
 flat, as usual, clear ...
 into transparent ... 11 x .8 ...
 ... less than 28 hours.
 Hatched May 25 Head ...
 May 25 ...
 May 28 1.4 ...
 May 29 1.5 ...
 May 31 ...
 June 1 1.7 ...
 June 2 2.2 ...
 June 3 2.4 ...
 June 4 2.4 ...
 June 5 2.5 ...
 June 6 2.5 ...
 June 7 2.5 ...
 June 8 3.0 ...
 June 10 3.2 ...
 June 11 3.2 ...
 June 12 3.3 ...
 June 13 3.7 ...
 June 14 4.0 ...
 June 15 4.5 ...
 June 16 4.5 ...
 June 17 4.5 ...
 June 18 4.5 ...
 June 19 4.5 ...
 June 20 5.0 ...
 June 21 5.5 ...
 June 22 6.0 ...
 June 23 6.0 ...
 June 24 6.3 ...
 June 25 6.5 ...
 June 26 6.5 ...
 June 27 6.4 ...
 June 28 6.5 ...
 June 29 7.0 ...
 June 30 7.5 ...

2.81	8.2	cat	14	11.6
"	7.1	"	8	9.3
"	3	8.5	10.0	10.0
"	4	"	10	10.8
"	5	"	10	11.4
"	6	"	12	11.8
"	7	"	12	12.2

Standard center of (1) is not
 a dot but a short straight
 slit. Central dots fainter
 than beside (1) and (6). No
 whitening at first

Head May 31. Elliptical, narrow (behind)
 and widest through 4-5. 1 lat. space broad.
 narrow at ends. ridges on front 5-8 retreating
 ridges prominent with rounded tubercles, 2 large
 black topped spines (1) no or (2) 5-12 (5 or 3 lat)
 normal skin being granular with pale streaks
 apical on the tubercles. Pale green. (1) ridge whitish
 a black shade under 2 showing from cth
 pigment under the skin. Still some alternate
 (1) pairs of 5, 7, 9 not leaving out a tubercle.
 (1) ridge whitish, rounded before head aligned granular
 tubercles, ridge prominent. (1) a little ascending
 5-8, 1 lat space broad, 5-8 small retreating
 depressed space (1)-(6) all distinct, whitish, (1)
 somewhat oblique. (1) indicated as a large
 smooth tubercle. Tubercles moderate, large, (2)
 largest, forming the ridge and having long stiff
 setae. color blackish at tip. (3) brown fine white
 5-13. Skin fine granular without a spine on the
 tubercle or elsewhere except a few at the extremities
 3-13. Color green, not pigmented but well colored
 whitish line (1) 3-13 slight broken 2 transverse
 under the depressed space (1)-(6) whitish
 Under the 2 are A2 the granules are in latitudinal ridges
 spaced out on (1) tubercles, (2) tubercles bear papillary
 granules with enlarged distal tips. These are dark
 stand, more pointed like spines and are large
 at the extremities 3-13. a very few also on (1) tubercle
 as well as (2) but become distinct no more than on 3
 (1) spine 11 tubercles somewhat less prominent
 but still distinct. 1 lat. space narrow, flat,
 lat. ridge ascending to which is slight and
 retracted. Elliptical, more narrowed behind tail
 moderate not notched distally. Depressed
 spaces distinct, moderate large, the granules

is more or less not edged off and opening very distinct
 are cutting through the yellow tubercles of a dot for black
 smooth not shiny except a top off. dorsal tubercles
 deer granular papillary but not like papillary tubercles
 (3). (1) line white. (1) green, some eyes brown tubercles
 on the bottom ridge, ridges numerous the paper
 above papillary on the (2) tubercles, not characteristic
 (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13)
 as before. (1) line distinct, pale yellow, top of upper
 half of lat. space green, top of space whitish
 a transverse pale line on 5 and 6. (1) line
 and most spines wanting dist. ridge on sides ridge
 with tubercles below (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13)
 (1) line. (1) smaller white. (3) line 5-13.
 (1) ridge whitish, rounded before head aligned granular
 tubercles, ridge prominent. (1) a little ascending
 5-8, 1 lat space broad, 5-8 small retreating
 depressed space (1)-(6) all distinct, whitish, (1)
 somewhat oblique. (1) indicated as a large
 smooth tubercle. Tubercles moderate, large, (2)
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 and most spines wanting dist. ridge on sides ridge
 with tubercles below (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13)
 (1) line. (1) smaller white. (3) line 5-13.
 (1) ridge whitish, rounded before head aligned granular
 tubercles, ridge prominent. (1) a little ascending
 5-8, 1 lat space broad, 5-8 small retreating
 depressed space (1)-(6) all distinct, whitish, (1)
 somewhat oblique. (1) indicated as a large
 smooth tubercle. Tubercles moderate, large, (2)
 largest, forming the ridge and having long stiff
 setae. color blackish at tip. (3) brown fine white
 5-13. Skin fine granular without a spine on the
 tubercle or elsewhere except a few at the extremities
 3-13. Color green, not pigmented but well colored
 whitish line (1) 3-13 slight broken 2 transverse
 under the depressed space (1)-(6) whitish
 Under the 2 are A2 the granules are in latitudinal ridges
 spaced out on (1) tubercles, (2) tubercles bear papillary
 granules with enlarged distal tips. These are dark
 stand, more pointed like spines and are large
 at the extremities 3-13. a very few also on (1) tubercle
 as well as (2) but become distinct no more than on 3
 (1) spine 11 tubercles somewhat less prominent
 but still distinct. 1 lat. space narrow, flat,
 lat. ridge ascending to which is slight and
 retracted. Elliptical, more narrowed behind tail
 moderate not notched distally. Depressed
 spaces distinct, moderate large, the granules

710

Antaresa peregrina from Mr. Reutenmüller

colony note Stage I (June 1 1898) Hd. round smooth
rather ^{rather} brownish-red 1.4 mm eye black setae pale

Body deep ochraceous black, tubercles black
hair white. Seps distinctly incised. 3

Tubercle for sep. a single on 12
but evidently double on 11 and a
pair on the anal plate On 13 and

on 2 and on legs sep. a few
hair prominent on 6, 8 but not
forming large or distinct tubercles

with growth no change but scutum shows whitish
band ④ is on 2-4 and single hair for VII on legs
seps. all evidently as in adult. No penultimate I.

Shed June 5 Hd 2.1 mm purplish blackish brown the
1 and mouth spots greenish Hair pale 1st 2nd.

Body light green the tubercles orange; feet
including plate of anal foot reddish brown.

Hair black slender no tuft on each
most longer than the others and with small
spathulate tips 2nd hair moderate

numerous all reduced to minute yellow
scales. Seps somewhat incised tubercle

with slight shaft the hair is distinctly
crowned. ① 2 single but compound; pair on pt.

Later a pair yellow line along ⑤ 5-13. and
hair streak above anal foot.

Shed June 7 Hd 3.6 Smoky brown, ① median
suture, an area before the eyes, mouth

③④ with central plate
most pale blue but not
contrasting above eyes

and antennae whitish all the 1st tubercle a
smaller 2nd smoky black patch and a
large patch each side the preapophysis

quicker above Seps incised but not nearly
bunched 12 highest. Bright green the whole

rather pale orange yellow, along 1st hair
and a large black on 13 and 14 spots black

② distinct brown on 12-15, and foot brown
edged yellow before. The feet, abd. clasp and

with whitish band brown. ① dark all faint
silvery at base, ② 6-8 with a large purplish

Silver spot below spiracles brown, pale edged.
Shed June 16 Hd 5.3 fl. color, a diffuse brown glaze

with few eyes, black spots at 1st tubercle I-IV and
also on 2nd on each side after 5; a smoky line

in pale diffuse patch below. Antennae deeply notched
whitish. Hair brownish ① inner line pale ② pale

line not contrasted. 1st hair from the hairy area
spathulate tipped; brown 2nd yellow scales also

some coarse yellow d. hair silencing to some, the
tips clubbed. Color as before with change.

Shed June 27 Hd 8 mm pinky brown, as before but black
dots much smaller and all a faint smoky line up

from ocelli. Green with all pale blue, silvery pink spot
① 5, 6 and ② 6, 7, 8. Spiracles pale yellow with 2 black lineate

marks. Superficial line brown yellow 5-13 especially 1st on
13. The feet testaceous; darker abd. brownish. Hair as

before but less distinctly clubbed tipped & except 2, 5 & 12
which are somewhat brown, not black. Hair small, short erect.

Shed June 17

incised, S-V region retreating below ridge.
Smooth, no hairs, all finely granular. The
blue hairs ① 4 & 12, ③ 2-13 and pl. remain
smooth, rounded. The others are obsolete, of
yellow S-V line on ridge. 711 Spring 1946. (Yellow)

Caligula japonica from Hon B. June 1, 1948

Head 2.1 mm round small black, upper yellow
and a large spot before eye; a smaller one
also base of antennae and on labrum.

Body smooth, without 2' hair on tubercle.
Prothorax with a crown of 4 to 7 smooth
spines as high as in *caligula* all about
equal ① of 3 & 4 a little longer. 4 on 2.

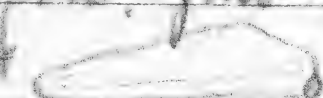
4, hairs 5-12, a single dorsal on 12, ten on
13 ant. and a pair on anal plate.

VII without any tubercle, a hair on a dorsal seg.

Body yellow densely with a broad black
irregular edged band along ③ that sends
up streaks in some of the incisures and
a low band across 2 and 4. Tubercles

yellow except 2, 4 and ① 12 which are black
as also ③ white except spine black.

Abt. feet pale. Thoracic black.

Head 2.8 yellow green on free side of cheeks
below black to vertex showing an irregular
edge before. jaws black. Body highest
through 4  held angled then

smooth skin. yellow green, a narrow
red line along ③. ① of 4 & 12 a little longer
than the others. Tubercles ① 4 & 12, ① of
2, ② of 13, pair on anal plate and ③ of

slight prominence a little longer than the
other granules. Feet with black hairs, and a
few hairs on ③ 4. Hd 1.5-V blackish green, all
above S-V ridge greenish yellow, and colorless black
later ① 4 & 12 black blue, feet granular on ① 4
2-12 turquoise blue, the rest yellow.

Spines black. Tho. feet, a blacker narrow
line below ③ ridge and dot in anal foot
plate black. a fine pale seta behind
③ on 5-12 (x) and several hairs on anal foot
anal plate produced a square behind.

Shed June 3 Hd 4.6 (sh hd 3.1) all yellow green,
ocelli & end of jaws black. a line marks at
base of jaw. Red same shape, high and
angled at 4; anal feet large, with narrow
ridge along ③. ② hair on 3-12 reduced to
round buttons with no spines. Skin rather

densely covered with small round opaque
2' granules. ① of 4 and 12 longer than other
white, blue; ② 2-13 and anal plate also have
the rest yellow. Head yellow green, the granules
yellow, feet clearer green, without marks
the abdominal area rather densely hairy.

Spines white, not removed. The ant
are all somewhat reduced except ① 4 and 12
which stand out higher than before by
contrast. Hairs strong black 4-7, crowded

later d. yellow green a faint yellow line
along ③ ridge S-V region black, collar and
anal foot black green.

Shed June 10 Hd 6 mm green, thorax white dotted
above level of eyes, base of jaw, antennae on
ground of eyes yellow, ocelli black. Cth

projecting, a prominent sub-styral ridge, anal
plate narrowed behind; 4 highest, seg not

yellow crown. Feet & abd. clasper brown
1st hair 1 on feet black, 2d all yellow
with the little scales & the d. coarse smooth
brown. Silver patch ② 6 and 7. All other
712

Antheraea gammae in oak from Va. B.
Hd 4.3 brown, shaded with emerald green,
prominent in sutures ocelli dark, hair
pale with 1 & 2^d. Body with dark segs.
1 deep incisions like *polyphorus* 3
tubercles, 1 d. on 12 and pair on anal pl.
Clear yellowish green, a yellow line
along ② 5-12, 1st feet, abd. clasper,
A plate of anal foot* and a line from ② 13
to anus brown. Plate of anal foot
edged yellow before. Tubercles small
but distinctly browned by the few hairs
which are more or less, a few stiff
yellow hairs from skin^d. but most
of the numerous 2^d hair are short
club-shaped yellow scales, quite small.
Tubercles yellow except ③ ④ 2-4, ③ 5-12
and pair on anal pl. turgid blue.
Spinacles light brown. VII no tubercles
but a black hair on 5, 6 and 11.

(*i.e. just back of the foot, the yellow line before
the brown patch continues to ② line, ending in
shed June 5 - Hd 6.4 mm pale green with
scarcely a hint of brown except about

mouth brown pale blue but not contrasted
Spun July 4

the ocelli. Clypeus small slightly notched
at side, 1 & 2^d hair present, 1d collected in
hitch. Body as before, ascending later and
bunched. Plate of anal foot large. Tubercles
small, ocelli with a shaft, the seta
slender a few long and other short, all
blackish. Some very coarse yellow
sparse 2^d hair dorsal, dorsal from
and the fine yellow 2d scale as before.
Clear bright green a yellow line along
III 5-13, 2 on front yellowish. Feet, clasp
& abd. feet part of anal foot and
line from ② 13 to anal plate brown. Spinacle
pale brown. Hair on feet black. Tubercles ① ②
yellowish green ③ ④ 1 line of anal plate
pale blue. Plate of anal foot yellow before
below ③ 6 a small metallic silvery patch.
neck at end edge of 2 subventral red.

Shed June 13 Hd 8.3 mm whitish green, ocelli &
ends of clasper brown. ① ② ocelli obsolete but
still distinct hair and clasper (short ones clear
③ ④ the rest a little larger, ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮ ⑯ ⑰ ⑱ ⑲ ⑳ ㉑ ㉒ ㉓ ㉔ ㉕ ㉖ ㉗ ㉘ ㉙ ㉚ ㉛ ㉜ ㉝ ㉞ ㉟ ㊱ ㊲ ㊳ ㊴ ㊵ ㊶ ㊷ ㊸ ㊹ ㊺ ㊻ ㊼ ㊽ ㊾ ㊿ ㏀ ㏁ ㏂ ㏃ ㏄ ㏅ ㏆ ㏇ ㏈ ㏉ ㏊ ㏋ ㏌ ㏍ ㏎ ㏏ ㏐ ㏑ ㏒ ㏓ ㏔ ㏕ ㏖ ㏗ ㏘ ㏙ ㏚ ㏛ ㏜ ㏝ ㏞ ㏟ ㏠ ㏡ ㏢ ㏣ ㏤ ㏥ ㏦ ㏧ ㏨ ㏩ ㏪ ㏫ ㏬ ㏭ ㏮ ㏯ ㏰ ㏱ ㏲ ㏳ ㏴ ㏵ ㏶ ㏷ ㏸ ㏹ ㏺ ㏻ ㏼ ㏽ ㏾ ㏿ 㐀 㐁 㐂 㐃 㐄 㐅 㐆 㐇 㐈 㐉 㐊 㐋 㐌 㐍 㐎 㐏 㐐 㐑 㐒 㐓 㐔 㐕 㐖 㐗 㐘 㐙 㐚 㐛 㐜 㐝 㐞 㐟 㐠 㐡 㐢 㐣 㐤 㐥 㐦 㐧 㐨 㐩 㐪 㐫 㐬 㐭 㐮 㐯 㐰 㐱 㐲 㐳 㐴 㐵 㐶 㐷 㐸 㐹 㐺 㐻 㐼 㐽 㐾 㐿 㑀 㑁 㑂 㑃 㑄 㑅 㑆 㑇 㑈 㑉 㑊 㑋 㑌 㑍 㑎 㑏 㑐 㑑 㑒 㑓 㑔 㑕 㑖 㑗 㑘 㑙 㑚 㑛 㑜 㑝 㑞 㑟 㑠 㑡 㑢 㑣 㑤 㑥 㑦 㑧 㑨 㑩 㑪 㑫 㑬 㑭 㑮 㑯 㑰 㑱 㑲 㑳 㑴 㑵 㑶 㑷 㑸 㑹 㑺 㑻 㑼 㑽 㑾 㑿 㒀 㒁 㒂 㒃 㒄 㒅 㒆 㒇 㒈 㒉 㒊 㒋 㒌 㒍 㒎 㒏 㒐 㒑 㒒 㒓 㒔 㒕 㒖 㒗 㒘 㒙 㒚 㒛 㒜 㒝 㒞 㒟 㒠 㒡 㒢 㒣 㒤 㒥 㒦 㒧 㒨 㒩 㒪 㒫 㒬 㒭 㒮 㒯 㒰 㒱 㒲 㒳 㒴 㒵 㒶 㒷 㒸 㒹 㒺 㒻 㒼 㒽 㒾 㒿 㓀 㓁 㓂 㓃 㓄 㓅 㓆 㓇 㓈 㓉 㓊 㓋 㓌 㓍 㓎 㓏 㓐 㓑 㓒 㓓 㓔 㓕 㓖 㓗 㓘 㓙 㓚 㓛 㓜 㓝 㓞 㓟 㓠 㓡 㓢 㓣 㓤 㓥 㓦 㓧 㓨 㓩 㓪 㓫 㓬 㓭 㓮 㓯 㓰 㓱 㓲 㓳 㓴 㓵 㓶 㓷 㓸 㓹 㓺 㓻 㓼 㓽 㓾 㓿 㔀 㔁 㔂 㔃 㔄 㔅 㔆 㔇 㔈 㔉 㔊 㔋 㔌 㔍 㔎 㔏 㔐 㔑 㔒 㔓 㔔 㔕 㔖 㔗 㔘 㔙 㔚 㔛 㔜 㔝 㔞 㔟 㔠 㔡 㔢 㔣 㔤 㔥 㔦 㔧 㔨 㔩 㔪 㔫 㔬 㔭 㔮 㔯 㔰 㔱 㔲 㔳 㔴 㔵 㔶 㔷 㔸 㔹 㔺 㔻 㔼 㔽 㔾 㔿 㕀 㕁 㕂 㕃 㕄 㕅 㕆 㕇 㕈 㕉 㕊 㕋 㕌 㕍 㕎 㕏 㕐 㕑 㕒 㕓 㕔 㕕 㕖 㕗 㕘 㕙 㕚 㕛 㕜 㕝 㕞 㕟 㕠 㕡 㕢 㕣 㕤 㕥 㕦 㕧 㕨 㕩 㕪 㕫 㕬 㕭 㕮 㕯 㕰 㕱 㕲 㕳 㕴 㕵 㕶 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713

calk

Rhodina fuscipes from B. June 1 1898.

Hd 2.5 black with 1st & 2nd pale hairs.

Body rather slender, *Lasiacampis*-like deep black with a narrow yellow line broken by ③ or blotches & streaks dorsum & s-r from the line. A line above mouth yellow. Tubercles short, 3, all paired, no single on 12 but pair on anal plate. Tubs black with crown of stiff black hairs that very inconspicuous and absent of the long white abundant 2nd hairs though bearing a few very long pale yellow hairs that mix with the 2nd ones. Feet black, claspers pale.

Shed June 6 Hd 3.5 black, a labrum and antennae white; hair coarse, smooth

1st and 2nd yellow. Body broadly white dorsally down near to vent iii, transversely streaked with black laterally, the black cut by the white above, by yellow below. Spiracles and a humate area before & behind each pale blue. A yellow

line along i+r, a little orange tinted around the vent, s-r region yellow and black streaked, venter solid yellow.

Thoracic feet black, abd yellow the plate of anal pair oblique and marked with black dots centrally. Knots ①② pale yellow ③ yellow ④ black except at summit. Thorax s-r nearly solidly black; a pale median ventral line. Hair long fine, abundant the 1st and 2nd much alike, white d, yellow s-r and at ends. Knots low, obscurely annular with few hairs, a central one larger and joining with the predominant 2nd ones, the crown more spiny and shorter than of those of the lower with black. [In the other blacker one the white d. area is narrower, not reaching much beyond tubercles; lateral & s-r areas nearly solidly black, the lateral a little cut with white above and s-r slightly streaked with white yellow. Short hairs of ① and ② black] streaked across intersecting with black. Shed June 13 all white or nearly so.

Hd 4.5 mm. Body all paired, 1 row and
pair on anal plate. Leg plate large, top
the anal ones - hump around, as high as
wide with crown of stiff decumbent hairs
and a few long ones, ③ with many long
hairs. Hd white, brown & blackish on the
sides. Antennae above, base 1st & 2nd yellow.*
Body white above, pale yellow s-v streak
with black lines more or less in the folds
of abd region and ventrally. Or fold
marked with orange. Ventral yellow,
leg 1 anal plate greenish yellow, the
feet dusky at base. Spiracles and areas
light blue. Hair abundant. Very much
like *Apatela* like, white d. yellow
2 and 13 & s-v. The median hair of plate
short & yellow. 3rd anal plate with brown
macula centrally. Resemble in *Lae-*
isomorphus and show head streaks in the
same way. The 2nd hairs
make pale dots lat. among the black
markings laterally. Claspers of abd feet
light brown. * or all pale yellow with
slightly dotted with black over the sides.
The feet are white d. pale yellow but no
marking, still a little black streak on lat.
but center hardly marked at all.

Shot June 29 Hd 6 mm. No change at all

Calc. .17 .28 .47 .78 1.3 9AT 6/10
 when a large hole was observed with plants
 as well as some other dead brown roots.
 ♀ w/ Jul 15 1898 7/14 Cal IV 15121

Chlorophanes *alcyonoides*
Holds on to branches & feeds on
~~low other nectar~~ eating honey sucking
young leaves. Ad. 3 all white. Body
thick, glands abt feet absent in 7. Warts
in 4 rows as usual with each few short
bristly brownish hairs. Vent whitest.

Hol 44- Same, all Spanish white, no
marks. Not small, hairs being a few
long ones at ends. (Thick flattened feet small
found on 14 179 of by rail at South Haven)

June 14. 7 Still a different but identical look the
appearance is great, very fine food is at
hand. Not long and over target. Birds

2500. Hair pale. In short ones have tipped
smooth, rest of ind. line. D. ^{4 (width) 5 mm.} small and weak.

[illegible]

715-714 Jan, 1999

Callus irregular
T 24 x ribbed on the

7 mu la tri no ta ta

in front of each COC. - 1/2 inch thick. 1/2 inch high. 1/2 inch wide. 1/2 inch deep. 1/2 inch long. 1/2 inch thick. 1/2 inch high. 1/2 inch wide. 1/2 inch deep. 1/2 inch long.

Aplodes mimosaria

817

July 1898

egg from green leafy plant cut no. 15041

June 16, 1898. Northaven L. I. Elliptical very strongly flattened above & below, the sides sharp like little cakes cut out with a punch; sides +. Strongly reticulate. The apices almost like granules, appearing light in strong light. Not showing bright orange color. Size .75 x .6 x .4 mm.

one end shorter than the other. June 17 reddish brown. June 18 pale brown, slightly darker with dark

no. 25. Body flange, spiracles 5-8 as 5-9, pinkish brown with faint narrow d. i lat. brown line the latter expanding into spot at the flange. Setae short another tipped dark. Venter darkly shaded. The flange, bear it & it remains normal. All setae incl. lat. with smaller tips. Flange whole might be left alone, largest centrally. The lower looks dark brown. Setae quite uniformly dark brown. A few granules of dirt adhere to the sticky state on lat. angles.

Stage II. 3 Rump, but lateral, a slight point at apex, lateral all with large up to 6-13, 10-15 on prominent processes 5-9; skin thin, spinulose granular. Yellowish brown, the processes darkish; tubercles pale; all grizzled by the pale granules. Setae pale, short, pointed. Hd. 4-5

Stage III. July 9 now rougher or granular (10-15) and flange 5-9 also smaller. Lat. point and apex. High pair of points on 2 and 13 before a small plate. Lat. rounded, slightly lobed. 6-8 yellowish brown, dense of pale yellow granules a little mottled with dark red brown esp. in a patch below processes. Tubercles conic, high, setae short, stiff, white, no defined marks.

Stage II. July 17 Hd. 6-7 lat. point (5-9) faint, barely & longer the spiracles on the dorsal aspect, obscurely 6-8, slightly lobed. Setae 10-15 pale conic. Other points on 2-4 and 12 as before some on 10, 11. Body brown d. green lat. v. the under side of projections and a series of reticulate marks. dark brown. Tubercles 10-12

718=746

egg from large green leafy plant cut no. 15042

Northaven L. I. June 16, 1898. Elliptical

flattened faintly shaped reticulate shiny hard in a bunch of 3 to 6 not much

as usual. One end is flattened, truncate, not exactly asymmetrically. Color pale grayish green (light under with in cover, likely white back). Size .8 x .6 x .5 mm.

Hatched June 30 Hd. round, brownish black, .3-4. Body slender, whitish, scarcely marked on left by five distinct transverse black bands which are on 5-9 and a setae narrow one on 4. 2-3 6-12-13 a little dusky shaded. Feet all pale narrow in length. Setae scarcely visible & very short, whitish, simple and pointed, from whitish & conspicuous tubercles. Tubercles small white oval but not long. Head 1-2

Stage I. July 3 Rump pale granular. All essentially as before.

Stage V. July 32 Hd. 1.2-1.3 whitish, roughened. Dorsal leaf thin, slightly granular, 8 dark brown. D. d. granules and on 5-7. Lat. processes oblique, shaded brown & pale below esp. on 6, granules as before, 11-12 very high, many sharp pointed tubercles on 11-12, granules slight, faint granular on 10-12. Setae 10-15 moderate high, other 10-12 small granular.

Stage VI. July 33 Hd. 1.6 lobes slightly pointed, granular rusty brown. Body granular, tubercles prominent. Lateral processes black 10-12 5 and 9 small 6-8 large 4 conic on 6-8 a 5-8 elongated with 3 conic on 3 and 9 a slight 5-8 spinulose 10-12 11-12 on long conic, all granular, dorsal leaf thin a little roughened, long lighter granular d. 6-8 faint brown broad longitudinal and vent. dark brown spots 6-9 ant. and a dark white lat. line 10-12 spinulose, dark pointed. All lat. lat. 10-12 lat. 1.5 white banding. Stage Aug 30 dark dorsal between leaves

719 Sept 26 1899 Genus X

eggs from larvae 15046 Brookhouse 2 I
June 17 1898. Rounded elliptical, flattened
above & below but not in a plane, perfectly
rounded; one end truncate, the truncate
part bulging in its center. Neatly
reticulate. The cell areas flattened
slightly polyhedral. Pale green, some-
what grayish, shining. $8 \times 6 \times 5$ singly.
Hatched July 1. Hd round, brown black & pale, 3+
Body slender, normal, white with 5 smoky brown-
black trans. bands on 6-9 and slight narrow ones
on 2-4. Feet pale. All like BB 718. Also saw a 4
color not quite as dark as 19, but a little broader
and connected by a narrow dark lateral line
[Did not see 3 referring to]

Therapsyllus pellucidaria (v. 753)

720

Notodonta georgica? I on black oak, Brookhouse
2 I: June 18 1898. Hd. broad slightly lobed,
mouth pointed; pale brownish, shining, a
smoky band up from eye and across
foretop leaving the face pale; w. 6 mm.
Body shining smooth. 12 a little enlarged,
seg. femur 3 annulate. Tubercles small
normal (outperforate), those with col
anal & hyp. plate black. Body and feet
a diffuse basal reddish shade 4-13,
more distinct posteriorly, a red-brown
line along subventer and base of all
feet widened into a distinct patch and
darkest on segs. 5, 6, 11 & 12, also slightly
widened on 7. Tho. feet black, setae short
black, stiff not glandular. Tubercles
on 11 & 12 triangular, on other segs. square
Shed June 20. Hd. 1.1 as high as wide, occip.
notched. Flat before & small; andid greenish
smoky, black at posterior edge of cheeks

almost a vertex. Body pale yellowish, dorsal
broadly diffusely red brown, subventer distinct
as as before. Tubercles ^{except minutely} concolorous, feet, except
anal which are whitish, black. No shield
setae dark, small, stiff. Sd (below) lat. and
slig. yellowish lines faintly indicated.

This & red shade gradually fades out pe-
sisting longest on 12-13. Body rather

transparent whitish green, poorly pigmented
Shed June 27 Hd 1.8 high bilobed white & black

from eye to jaw. Body white & has darkish
translucent, Sd white lat. region translucent


greenish; lat line narrow faint yellowish; sublig
yellow with red brown dots SV forming narrow

line & tingling bases of feet. 12 high centrally, 7
tubercles reddish and yellow side line behind

ocelli. Leaves strong vein for feet.
Shed July 1 Hd 2.7 regular gargica

Shed July 7 Hd 4.2

721

Tiny egg on Clathra albifolia Greville
L. D., June 22, 1898. Spherical above & a
little pointed at vertex, base flattened
slightly. Smooth, shiny, not reticulate
colorless translucent  the embryo
giving a reddish shade. Diam. 1 mm.
Hatched June 27 (and all first larvae)

July 1 all sunny ended red to J (big box)
July 10 entered cold, turning out dust.

Out Oct 10 1898 *Diphthera fallax* Hb.

Cut no. 15767 722 @ Oct 11 '98

Opalida egg on *Whitman dentatum* South America

June 23, 1898. Circular, much flattened,
dome, 48 ± ribbed, diminishing by confluent
to vertex which is irregularly reticulate,
ribbed. Rib slightly fluted, the spaces
smooth, finely punctate rugose, no cross
striae. Microstyle smooth. D 1 mm. height .2 mm.
very white, slightly shiny. no marks

Stage I Hd. 25 rounded, eye black, mouth brown,
translucent, colorless. Body translucent, slight
whitish, segs. convex, hair white, spinulose
i-v, i slightly blackish except on 11 which
looks paler. Hair equal, quite distinct, 18
above v, no subspiracular. Feet rudimental.

Stage Hd. 4 colorless, slightly bilobed. Warts absent
in line trans, is nearly imperceptible, all
with central hair and distinct crown of long
hairs. Hair pale except central of 1-11
which are black. Translucent, green from
red, faint traces of a white sd line.

Shed June 26 Hd. 75 flattened, flattened seg.

With growth from sides out, not apper-
as oars only (one left at ends & spiracles)
all velvety green, soft, not opaque, smooth
hair as a continuation of skin spinules, and
members of the 3 narrow whitish lines.

believe, hd. retractile at apex. Hd whitish green
body clear green with narrow white sd line
and broken dorsal one. Warts moderate, 10
20. iv behind upper edge of spiracle, v just below
about equal vi large. Hair quite numerous short
pale & black mixed spinulose. Body narrow behind
later warts all marginally pale brown.

Shed June 28 Hd 1.4 mm round, green, a diffuse dark
brown shade on angles of lobes. Body short and somewhat
flat, anal feet spreading. Green, warts i-v green-
plish brown, the d & sd line narrow, broken
white. Hair very short, fine but numerous
one all the warts, perfect brown mixed with
pale stem, fine brown spinulose. Warts i-vii about
in line dorsocentral; ix behind spiracle, v very narrow
and below it. vi smaller, pale somewhat broader
yellow plate concolorous green, with pale bases.
Late all with i-vi brown, a brown ring around spiracles
ii on 2 & 3, & on 11 have slight larger brown spot
and there is a slight tendency to form a brown
stripe along 11. Thorax short, dark brown, short flat.
Hd nearly whitish, body clear green.

Shed July 3 Hd 2.4 rounded, green, whitish, black dots on 13
body flattened short & thick, feet rudimental, of just size
with many obsolete, just elevated and the hairs they
still numerous, very short and fine, minute, invisible
without a lens, the hairs darkly hairless. Small pale
soft warts green the skin densest covering of spinulose
narrow d. & dorsal & d pale line faint, not
contrasting. all the warts brown faintly marked &
velvety red-brown, the spiracles also and tips of feet
the most distinct spots being a fine edge on
spiracle on 12 and a dorsal patch on 13 before
the sd line which closed approached each other then
Hair on head, and edge of 2 and anal pl. rather
coarse and distinct, the rest rudimentary. Spin-
ules black. Thorax as much behind as it
was short going the rest down.

at 12:00 pm '99

2000 2/10/00 2/10/00 2/10/00 2/10/00 2/10/00

12. 11.25.196. 7.50 to 8.10 a.m. 1st day

Elphinstone, 1840-1841

2001-2002, one and half of the year

and $\frac{1}{2} \text{ mole}$ of H_2O is produced.

Shining pale yellow. Inferior of shape

not available $8 \times 6 \times 5$ mm

One has observed the light comes in

Person from the ship, was supposed to

Collected June 24 Spent some time in the morning at the
quarry with a large white cat found 2 - most fine

greatest safety of the patient. The patient is the one who is the most important factor in the treatment of the disease. The patient is the one who is the most important factor in the treatment of the disease. The patient is the one who is the most important factor in the treatment of the disease.

Still - 1/2 gal. of milk, 1/2 cup of sugar, 1/2 cup of

12-13 and below study the

...also remarkably closely the first a bird
...of the same date ...

III. What is the purpose of the study?

The Volume 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000, 1001, 1002, 1003, 1004, 1005, 1006, 1007, 1008, 1009, 1010, 1011, 1012, 1013, 1014, 1015, 1016, 1017, 1018, 1019, 1020, 1021, 1022, 1023, 1024, 1025, 1026, 1027, 1028, 1029, 1030, 1031, 1032, 1033, 1034, 1035, 1036, 1037, 1038, 1039, 1040, 1041, 1042, 1043, 1044, 1045, 1046, 1047, 1048, 1049, 1050, 1051,

1. The first group, the "White" group, is the most numerous. They are the most common and are found in all parts of the country. They are the most common and are found in all parts of the country.

may be a friend to success & happy results
I hope you the best & all the good in the

in 1 year. Spent time with black. Other school
in 1 year. Spent time with black. Other school

1. The first part of the paper is devoted to a general discussion of the problem of the existence of a solution of the system of equations (1) for arbitrary values of the parameters α and β . It is shown that the system of equations (1) has a solution for arbitrary values of the parameters α and β if and only if the condition $\alpha + \beta = 1$ is satisfied.

[illegible]

The handwriting is extremely faint and illegible throughout the entire page. The ink appears very light or faded, making it impossible to discern specific words or sentences. There are some darker smudges and marks scattered across the paper, which might represent individual letters or small groups of words, but they do not form coherent text.

No legible transcription can be provided based on the current quality of the scan.

[The page contains two columns of extremely faint, illegible handwritten text, likely bleed-through from the reverse side. The left column begins with "I have been thinking..." and the right column begins with "I am very much interested...".]

201. Large on the edge of leaf or on a point.
Cylindrical the small shaded and a marked
central constriction; base flat a little spreading;
a longitudinal groove along the base part of
each side; 6 longitudinal striae, not marked
enough for ridge the 6th (rest) surface fine
Shepherd. Sheet to me 1.4 x .4 x .5 high mm
of Chondola? Collected 22 July 1898. m

upper side leaf of *Q. tinctoria* in a web.
web 8 x 5 mm I Hd 1.3 mm Hd a. dense dark brown
distinct laterally. Fr. brown
pale whitish brown. Skin
smooth, segs. serrulate.
Scales short and pale but
distinct with enlarged tips.
i, ii, those of c-sts are broad and
especially short and paddle-shaped. Lateral more
or less threads rising up to anthers, strong web from
front.

[illegible]

727
 Aug 20 14 cat. Bear Park, Aug 20 1898. most like
 fasciata II but on *Agave*.
 Elongate elliptical long. somewhat before
 round graduate behind. D space
 broad, flat, narrowing before. Cat space
 narrowing must behind. Ridges large
 tubercles not beaded slightly
 alternating 2 d. Spines black tipped.
 Skin very fine, contiguous, dense of
 appressed, flattened granules, the
 granules of some with single point
 and a tubercle and some large
 coarse 2 d spines but as long as
 the setae. Rep. spaces all indicated
 but faintly. Colorless, no pigment
 yellowish translucent scarlet green
 [also 2 eggs unusually thick and yellowish
 in color, one measured 1.6 x .4, 1.4 x 1.0 mm
 length probably .2 mm. Rets. distinct coarse.
 nodules, also numerous sharper and
 Rets. of eggs faintly yellowish slightly shiny
 hatched out by *V. scripta*? (one)
 was marked by scarlet. There
 was plenty of large flat tubercles
 on the body of the larva.
 The larva died.

[illegible]

729 = 226

Rostrum in pea pods (Hattisburgh) Aug
 July 24 1898. Head reddish, a curved brown line
 more anterior to edge of coh below which
 white, w. 2.1 ± Body smooth, setae pale
 from moderate tubercles which are in very
 large blackish common areas, i and iv
 largest and iii a before spiracle, cith at
 middle of upper corner; Setae of iv opposite
 middle of spiracle. Venter brown, d. ad
 stripe white, broad; subventral below
 & whitish but forming a band w/ on
 thorax. Coh reddish, edged with black
 on the lower margin. Anal plate the
 same but more luteous and with a broader
 dusky side edge; both distinctly corrugated
 abd feet pale shield scarcely corrugated; the
 feet reddish. D line $\frac{1}{2}$ as wide as space i-i
 sd fills in all space ii-iii. Shields not marked

(Aug Sept 8, 1898) *Hydroecia*
cataphracta

730

Aug 3 1.1 5/12

" 4 1.2 cat

" 5 1.4 "

" 6 1.7 "

" 7 1.8 5/12

" 8 2.2 cat

" 9 2.4 "

" 10 2.5 5/12

" 11 " "

" 12 2.9 cat

" 13 3.3 "

" 14 3.4 "

" 15 3.5 5/12

Hydroecia little young mite on dust
 and, Morris Plains N. J. Aug 1 '98
 colorless, feet green, shape normal
 of m. distinct posteriorly projected
 weakly alternating, normal
 skin smooth, shiny [faint?]
 female before, rounded, a little point
 behind, d. lat space rather broad
 equal. Thorax slender, rather long
 no distinct central yellow streak
 shed Aug 4 & space rather narrow
 sides undulating, prominent sides
 @ approx. ant. (the body top)
 long pale 2^d spine on ridges, also all
 ridges finely corrugated, not
 regular the granules being appressed
 rather long, slender but quadrate
 all colorless but slightly green.

A line of 2 large ridges very slight the d. sp. filled and flat.
 Tubercles small & rather remote. The incisures are
 not distinct and the dep. spaces not shown by
 hollows all finely shagreened under. No 2^d spine
 on sd ridge nor on skin, only on the small lat. tu-
 bercles not spreading off as in 733.

shed Aug 12 like *acris* III.

shed Aug 12 " "

IV broken sd line & d. rings

= *parvula* (see 5 notes)

Cocoon typical dark fluid and spin white
silk between partly bitten leaves.

Found in August 1898 *Trupia*
731 *delineata*

Proctos (only) on pine tree Glendale Cal.

Aug 2 1898 Egg Low domed, flat edges very
thin, flat like spatula. Surface smooth with
irregular rows of white elongated beads lying
regularly along the sides and margin, the points

of the beads in rows not quite parallel to the
surface i. e. surface of egg is not flat.

Translucent colorless, green from leaf
Catched (under)

③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩
1.2 1.5 1.8 1.9 2.5 1.2 1.3 Stage I Hd lobed, long

shiny, pale brownish body slender translucent
shimmer yellow, setae normal, long, stiff.

Thorax brown, rounded brown smooth tubercles
Hd lobed spiracle about equal to lat III IV; VI quad

to round, feet normal. Stage II Slender and
not shagreened but shiny - thorax large. No feet

yellowish, rather transparent the feet showing green
blackish on thorax Hd whitish yellow. No

feet showing green, no incisions well
well marked. Body slender. Setae fine, not

of hole whitish. Processed stage and
locating. IV have white spiracle 2.35 mm
flat on back of leaf, yellow edge to edge
of anal plate. Stage III Hd slender

yellow, slender, smooth, no feet, but the
sides are folded and have setae on pale

brown pigment giving a faint translucent
to white sky bands, tubercles on anal edge

are minute, black. Setae smooth, thin
except at ends. No other markings

Stage IV very slender, thorax and a little flat
on sides, no feet, no markings

Stage V slender, thorax and a little flat
on sides, no feet, no markings

Stage VI slender, thorax and a little flat
on sides, no feet, no markings

Stage VII slender, thorax and a little flat
on sides, no feet, no markings

Stage VIII slender, thorax and a little flat
on sides, no feet, no markings

Stage IX slender, thorax and a little flat
on sides, no feet, no markings

Stage X slender, thorax and a little flat
on sides, no feet, no markings

Stage XI slender, thorax and a little flat
on sides, no feet, no markings

Stage XII slender, thorax and a little flat
on sides, no feet, no markings

delivered to me

Specimens determined in 1911.

These birds given to me have been

examined by Mr. C. J. May 3 1911

as Spizella socialis Linn.

The same specimens in 1911

have been determined by Mr. May

as Spizella socialis Linn.

They are compared with specimens

from the same locality

and are found to be

Spizella.

Love

h

Cocoon speckled dark flnd and spin white
silk between parts like leaves.

Ant in August 1898 Inura
731 delineata

Noctuids (only) on gum tree Glendale L.I.

Aug 3 1898. Egg Low domed, flat, edges very
thin, flat like spatula. Surface smooth with
numerous rows of little elongated beads ending
regularly, about 160 rows around margin, the points
of division in number not perceptible as the
surface is entirely flat and the beads not con-

spicuous. Transparent colorless, green from leaf
D1.2 H.2mm

Hatched (young)

Hd .45 .8 1.9 2.5 1.2 .3 Stage I Hd bilobed, long.

Shiny pale brownish Body slender, translucent
ochraceous yellow, setae normal. long. stiff
brownish from rounded brown anast tubercles
iv behind spiracle about equidistant iii & v; vi gone.

No marks, feet normal. Stage II Slender anal
feet stretched out behind, thorax largest. all pale
yellowish, rather translucent, the feet shining green
darkest in thorax Hd whitish yellow. Skin
quite shiny smooth, seg microns 4-11 very
well marked. feet slender. Setae fine, rather

feet pale whitish. D. vessel dark and
pulsating. iv lower edge spiracle. L 23 mm
Sit flat on back of leaf. yellow edge to cth
and anal plate. long tubercles obsolete. Stage III Hd translucent

pale yellowish. slender. smooth as before, but the
microns 5-11 folded and uneven in pale
yellowish pigment giving 6 faint transverse
pale interseg. bands. 4 tubercles on ant. edge
cth are minutely black. Setae smaller than
before except at ends. No other marks.

Stage IV Less slender, thicker and a little flat
translucent green, head slightly whitish. Body
tapering behind. Interseg. bands supplemented
by a broken sd and anterior straight stig.
Bands pale yellow the sd consisting of a dot
behind and a dash before it, distinct except in
thorax. Head a little greener. Setae pale. Feet dark.

Stage V Hd dull yellowish, translucent. Body
green marked with opaque yellow 12 short
trans interseg. d bands to level of ii that
13-14 broken into 3 dots. Many irregular dots
about 9 in each side above straight narrow
superst. line and 9 below it, none on the
tubercles, which are concolorous w brownish
(iii-v. brown) 4 black spots cth ant. yellow line
in anal joint anal foot. iv lower edge spiracle

Stage VI Hd retracted at apex, same. Body thick
and flat 11-13 tapering anal feet outstretched
backward, all with long claspers. Head
normal. yellow green, clear but opaque. Setae
light yellow marks as before but d trans
bands shorter (below anal) except dashes 13-14 that
almost touch stig line; dots more numerous (12-18)
some irregular. No black dots cth. Spiracle
brown below narrow superst. line. Setae pale
long s-v, tubercles obsolete, not colored.

On lower branches
of trees like fur back.
Solitary on under side.

Another on white oak, Chain Bridge
Va.

732 [see 1386]

		to shed		
		(1)	(2)	(3)
Aug 23	7.2	8.1	4.6	Green flange on beak, Rosslyn Va, Aug 6/1891
" 24	7.9	8.1	4.6	III A Elliptical flattened. Dorsal
" 25	8.3	8.2	4.8	space narrow, groove-like between the bases
" 26	9.4	8.6	5.4	of the horns. Lateral and sd space also
" 27	10.0	4.4	5.3	small mostly occupied by the large bases
" 28	11.1	5.1	6.2	of sd horns. Sd horns on 4-12 long, blunt
" 29	12.1		6.0	and rather thick, a little tapering and
" 30	13.5		6.8	projecting laterally parallel to leaf
" 31	14.3		6.8	and not far above it. of equal length
" 32	15.0		6.5	except 4th 6th 8th pairs of the 9 pair (joint
" 33	16.0		7.9	7, 9 & 11) which are shorter, about 2/3 the
" 34	17.0		7.5	length of the other. Horns of 3 lateral
" 35	18.5		7.0	whole length and sd of 13 short, like
" 36	19.5		7.0	the sd but about 1/2 the length obtained
" 37	20.5		7.0	by the ruderals. Sd horns at base
" 38	21.5		7.0	above a rounded button-like prominence
" 39	22.5		7.0	distinctly constricted off from the horn.
" 40	23.5		7.0	and as high as wide. Hairs moderately
" 41	24.5		7.0	numerous, on all the horns, short stiff
" 42	25.5		7.0	colorless with tubercular bases, color
" 43	26.5		7.0	green, mostly in the tips of the horns. The
" 44	27.5		7.0	skin is thick and transparent,
" 45	28.5		7.0	the pigment forming a small green core
" 46	29.5		7.0	in the horns. Regions between mostly
" 47	30.5		7.0	colorless. I count 19 long 13 short horns but
" 48	31.5		7.0	am not sure of the short ones. of ok. I give
" 49	32.5		7.0	3 horns on 3 & 4, 1 on 5 and 2 on 6-12 as in photograph
" 50	33.5		7.0	Skin with sparse fine clear granules. There are
" 51	34.5		7.0	St IV B (no 3) Sd horns all long, equal
" 52	35.5		7.0	otherwise the same in shape and color.
" 53	36.5		7.0	Same like the horns and grow new ones.
" 54	37.5		7.0	Three horns on 3, upper quite long, but sub-

ordinate to the others of sd. now middle small, lower
very small and without basal button. There are 4, upper
a functional horn others in a pair below it. Sd of
6-12 equal to sd 4 and very nearly uniform
Sd 13 quite small, subordinate. Lateral 6-12
small, but all haired like the sd. Basal
buttons hemispherical with the same clear
spiny hairs. Skin finely setose granular
Color green from the horn cores as before.

Shed Aug 23 not like no 3 much less fluffy
though hairier than before. Feather hair mat
a little between horns but the coating is thin and
does not show the structure. Otherwise same,
Shed Aug 27 Fluff

only smooth setae on the horns — except the
terminal primary ones which are slender
with truncate conical base — Sd horns have
a small indented base then the rounded knobs then
the horn ~~etc~~ sparsely spined. Skin glassy, shiny.

A shed Aug 8 21911 still shorter than the other but
about 3/4 the length. Elliptical and flat as before, the
blunt ends horns radiating from the disk of
discum. Hairs on bases of horn and bulbs all simple but
a few of these toward tip of long horns are lengthened
out and spinulose beyond the smooth base as in
Calybia. Skin granular sparse with minute setae
Same green, the narrow d. groove darker. no marks.
Aug 9 the short horns had grown out fully as long as the rest

B shed Aug 8 flattened elliptical the radiating horns
forming a flat disk; d. groove narrow edged
by the rounded bulbs of horns 4-11, that of 12 small.
Horn nearly equal 4-6 a little shorter especially
in front gradually becoming longer posteriorly.
Green especially the outer 2/3 of the sd horns, the body
more whitish; d. groove darker. Hairs more numerous,
all simple on the basal bulbs but of varying
lengths, shorter around the bases of horns. As the
end of sd horn many of the hairs are length-
ened and fine feathery spinulose beyond base
forming a fringe that fills up the space between
the flat disk of horns and the leaf. Side
horns all obscured. Skin setose granular as
before. The basal part of sd horn is small and
obscure dominated by the large nearly spherical
bulb that corresponds to tubercle i. Green color
is very like that of the leaf. except 4 & 12 which touch

Shed Aug 22 shape and appearance the same
Dorsal groove very narrow, the forked bases of
sd horns almost touching, the two rows of min-
bulbs separated by about their own width. Horns 4-12
moderately long, horizontal, a little the ant. ones
only a little shorter. Whitish green, the distal
part of horns brighter green. Hairs on the bulbs all
simple, numerous with enlarged bases. and
minute setae of long horn simple, all the fringe

cap. There on edge of bulbs.
all the hairs seem to be essentially as magnified thing & those
on the bulbs are still pointed, but they are black slender and
made of 2 parts, the one a thin bulbous base and the other
the middle part, the hairs long slender, touching & turning in
pairs and having a brown, green smooth at
base, the small mass of skin left sparsely granular.
setae I on a long clear, pointed base with some smooth
slender hairs above, II without accompanying hairs.
III - this the head is protruded like a long snout.
IV - May 19 has also this same hair structure.
The side hairs are slender, are $\frac{1}{2}$ the length of the long
sd, with a terminal tubercle bearing III and a number of
rather slender transparent hairs, some of which toward the
top are slightly short-spined. The pigmented ones
on certain recess part of the side hairs are visible from
a great respect between the long ones but only with care
When 2 is 2 1/2 inches wide, 2 1/2 inches small. Wailer says from small

I 1-1.6 } Taper
II 1.4-2.4 }
① ② ③ C.B.
III -2.9 -3.2 -3.8
IV 2.9-5.1 [3.2-4.4] -4.6 3.8-5.0
V 5.1-7.0 4.6-6.3 5-5.2
[6.3-8.2] 5.2-7.2
VI 7.0-8.2 8.2-11 7.5-11.5
VII 9.5-12.5 11-15.5 11.5-15.5
VIII 12.5-17.5

